

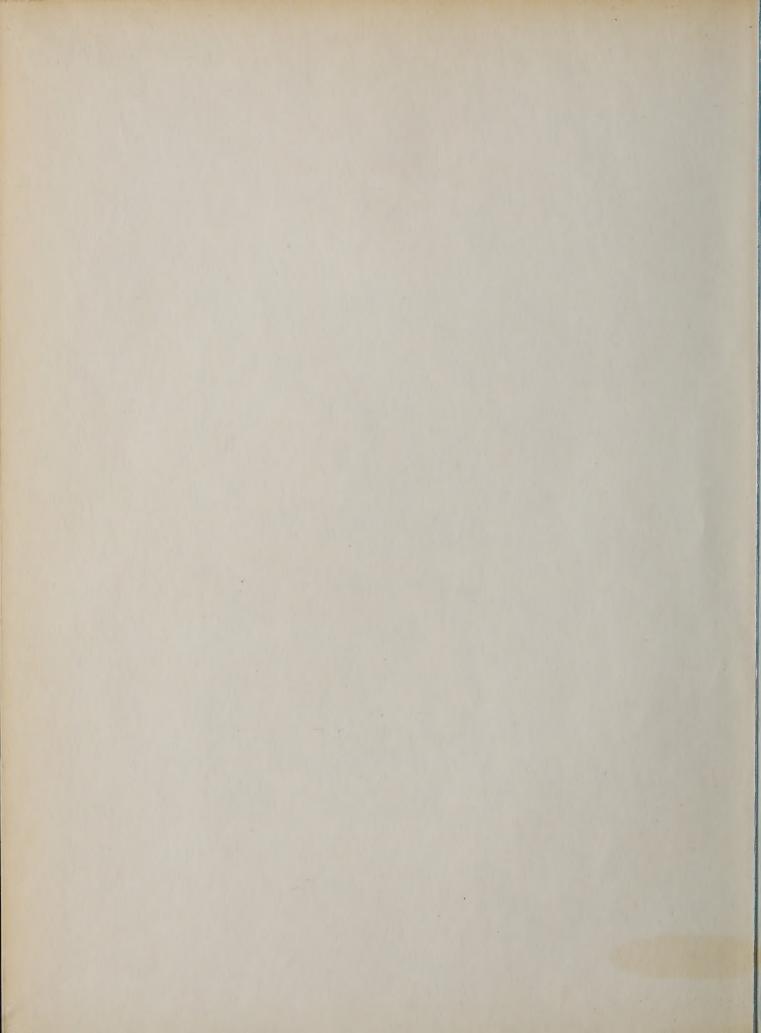
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GC 977.4 C333EL

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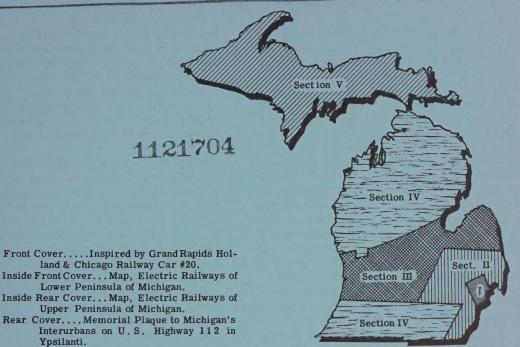




This issue, containing 220 pages plus covers, is considerably beyond CERA's present means for annual production; the kind of a job that can be done only once in many years. We proudly present.....

INDIANA COLLECTION

Electric Railways of MICHIGAN



Contents

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Section II EASTERN MICHIGAN SYSTEM

Section III ... MICHIGAN ELECTRIC SYSTEM

Section IV Other lines in LOWER peninsula

Section V....Lines in UPPER peninsula BLACK GOLD

BULLETIN 103

Electric Railways of MICHIGAN



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ABOUT BULLETIN 103:



..an entirely unofficial technical, educational reference.

Prepared as a historical project by members of the
Central Electric Railfans' Association, working without salary in the interests of the subject as a hobby.

FOREWORD:

Michigan was once laced and dotted with urban and interurban electric railways. It even boasted three main line railroad electrifications. But now it has no electric railway operating as a common carrier. Its longest surviving traction operation is a limestone hauler just a few miles in length. The one or two other existing lines measure only a few hundred feet of track together.

Searching out the story of the many lines that have now disappeared into history is a difficult task. Most existed only 15 to 25 years; most are abandoned for 25 to 30 years now. Finding a photo, timetable or transfer from one of these long-gone companies requires a combination of research talent, perseverence and luck. To reconstruct a system map sometimes takes days of field work and interviews; to develop a track connection map is well-nigh impossible, altho it has been done herein several times.

What we have found has been culled, manicured and polished and is set down in the pages that follow. Far from a complete historical record, this publication is a sort of bound file, a scrapbook of representative photos and notes intended to restore for you a few minutes of the "feel" of the old-time electric railway.

HOW B-103 WAS PREPARED:

For several years it has been the goal of some CERA members that Michigan would be the subject of one of the series of bulletins on the electric railways of various states. Richard Andrews of Wayne, Michigan, decided to do something about it. He contacted the CERA publications staff and came in to see just what would be needed

to get the project under way. He found only a lukewarm reception, not for lack of enthusiasm over the idea, but rather for dearth of authentic material accessible to the Chicago office.

This he set about to correct, working thru his associates in the very active Michigan Railroad Club and thru his own researches resulting from countless trips thru all parts of the state.

For an outstanding historical manuscript we are indebted to Robert E. Lee, who is with the Detroit Historical Commission. Bob has been researching the subject for many years. His complete manuscript should be published entirely on its own one day, but he has very kindly permitted a condensation to be used here to weave together the collection of photos, timetables and drawings into the fabric of our publication.

Many other people deserve extra thanks for their special efforts on behalf of Bulletin 103. In the interest of space limitations, individual acknowledgments are given thru customary credit initials in most cases.

As usual, we must acknowledge the failures and shortcomings which are inherent in this bulletin because it is an amateur production. The artwork, selection of material and editing is entirely carried out by a volunteer staff working a few hours each week without salary. None of these people are engaged vocationally in the publishing field. CERA's not-for-profit budget does not permit retaining professional staff, except for our printers, who within the limits of the planographing process, minimize the damage done to the bulletin by the lack of skill of your publications staff.

..Bulletin 104, our next, will continue the story of Indiana, covering northern Indiana and other items omitted from B101 and B102. Contributions of material on these subjects should be addressed to Publications Directors, CERA.



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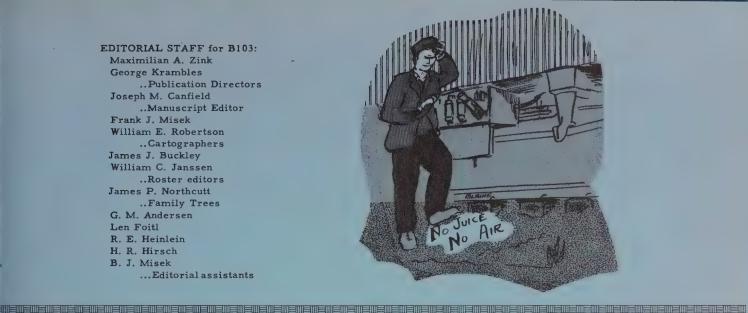
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DETROIT:

The first street railway franchise in Detroit was granted on November 24, 1862 to the Detroit City Railway Company. It incorporated May 12, 1863 and began laying track on Jefferson and on Woodward Avenues. The first trip on Jefferson was made by a bob tailed horse car on August 1, 1863. The Woodward line was opened August 27 and the Gratiot line on September 18 of the same year. The Fort Street & Elmwood Railway in 1865 built on Fort Street in competition with the Jefferson line.

The Grand River Street Railway, franchised in 1868, was responsible for the first court fight in 10 cal street railway history. Its franchise covered Grand River to Woodward, then Woodward to the River. When they started to construct on Woodward, they ranafoul of Detroit City Railway, who felt that its Woodward franchise gave it exclusive rights. The City Council felt that no such right was implied. Grand River laid its track on Sunday and on Monday, when the courts opened, DCR felt it was beaten and withdrew its complaint.

Other lines were built; some prosperous, some not. By 1879, DCR had consolidated all except the Fort Wayne and Grand River companies.

Meanwhile in the suburbs companies were springing up, usually from the ends of Detroit lines. All the territory of these lines eventually became part of Detroit and that city assumed franchises granted by the predecessor towns.

People had, however, become highly suspicious of every move made by the Detroit City Railway, and the concept spread that the company was becoming a monster monopoly that no one could control. While consolidation did come eventually, it actually was not planned at the beginning.

Detroit City Railway was aware of the public's dissatisfaction and it tried to appease public opinion. Services that had been poor were improved. Experiments were run with steam, ammonia, compressed air and storage batteries as possible means of motive power to replace horses.

These attempts to mollify the people of Detroit with less than a change of management were of little avail. So management changed; the name became Detroit Street Railway, and in the process the giant became larger by the acquisition of the Hamtranck line. Soon the public knew that there hadn't been a change at all, just a shuffle of the directorate. This "new" company bought the Grand River Company's lines, adding to the monopoly.

Suburban lines that hadn't been taken into the Detroit Street Railway Company were consolidated into the Detroit Suburban Railway Company.

The Dix Avenue line became the Detroit Electric, after a reorganization. Altho this company had a brief life, it was a very important one historically, as it was the first electrified line in Detroit. When the franchise was granted, most people figured it was but an extension of the

Baker line of the city system, thus spreading the tendons of the ''monopoly''. Also the new bare overhead electric wires worried some people, its noise irritated others, and what was even worse, the little Van Depoele car was terribly unreliable. Protests brought the City Council to take a closer look and to order abandonment of experiments in electricity in favor of the proven and reliable horse car. Detroit's first overhead electric railway operation came to a halt.

During the same year (1885) the Highland Park Railway had begun operation with electricity. The battery car "Ampere" was first tried, then the same car was converted to third rail. After an animal was killed on the third rail, that ended that. They strung overhead wire and installed a trolley pole on the car. This method proved so successful that a second car, the "Volta", was equipped in like manner. By coincidence, this first successful trolley operation was on the same Woodward Avenue destined to be the last street in Michigan to carry street cars some seventy years later.

Hazen Pingree assumed the office of Mayor of Detroit in 1889. His cherished cause was the conquering of what he felt to be the traction ogre and spent much of his term of office harassing the car companies. He fathered the idea of municipal ownership, and when he couldn't sell that, he came up with a scheme of building a line which would, for special considerations in franchise terms, build a competing system. Thus in 1894 was born the Detroit Railway, which built new lines familiarly known as "crosstown" lines, primarily in an east-west direction as compared to the radial pattern of Citizens' lines. Unfortunately for Pingree's idea, Tom L. Johnson, President of Citizens', arranged to buy up Detroit Railway stock, and within nine months it too was owned lock, stock and barrel by Citizens'. In all fairness to that company, it should be mentioned that they never raised the three-cent fare at certain hours which was part of Pingree's idea in creating Detroit Railway. Neither did the successor company. The fare wasn't raised until the City of Detroit took over the lines itself in 1922.

In 1901, all the properties of Detroit, the Detroit Suburban System and the lesser outlying lines were incorporated into the Detroit United Railway, which also operated most of the interurban railway routes radiating from the city.

The climate for street railway operation by a private company never improved in Detroit, however, and Detroit United experienced a continuing of the harassment of the public, the politicians and the press that its predecessors had felt. A dilemma was created by the rapidly approaching 1909 expiration of the major franchises. DUR could ill-afford to make improvements when it didn't know whether it would even own a property the following year.

The franchise expired and, after threats, charges and litigation, a compromise was reached which carried operation along until after World War I.

In 1920, a street railway commission was established by the city to build lines and to buy out DUR. Named Department of Street Railways, City of Detroit, its operations began at 10:10 AM on January 16, 1921, when birney car #100 began to run north and south on the west track of St. Jean Avenue. During 1921 six short segments of track were completed by DSR, most of which were later operated as extensions to existing DUR lines. DUR then agreed to give the city trackage rights to bring DSR cars downtown. Next, in view of the threat imposed by the DSR system, they agreed to sell out. On May 15, 1922, the DUR lines in Detroit were sold to the City of Detroit, Department of Street Railways, for \$19,850,000.

DSR's initial choice of the small birney type cardid not work out too well in such a large city. Nicknamed "Couzen's Cooties", the birneys had straps hanging from their ceilings after all the promises of "a seat for everyone". Public antagonism toward DUR turned to apathy about the whole traction picture when it was realized that municipal operation was not an automatic cure for the ills of the business. Losses instead of

profits appeared to be the rule and the old DUR 5¢ fare was soon raised to 6¢.

Extensions did, however, continue and roomy Peter Witt type cars displaced birneys and old DUR types, altho a few of the latter remained until after World War II. Altho Detroit had become the auto manufacturing capital of the world, street cars remained highly important to its internal transportation. Altho the first important street car abandonments were the Oakman line, on December 9, 1945, and the Hamilton line, on April 27, 1947, the company was interested in the development of the Presidents' Conference Car for modernization of its main lines.

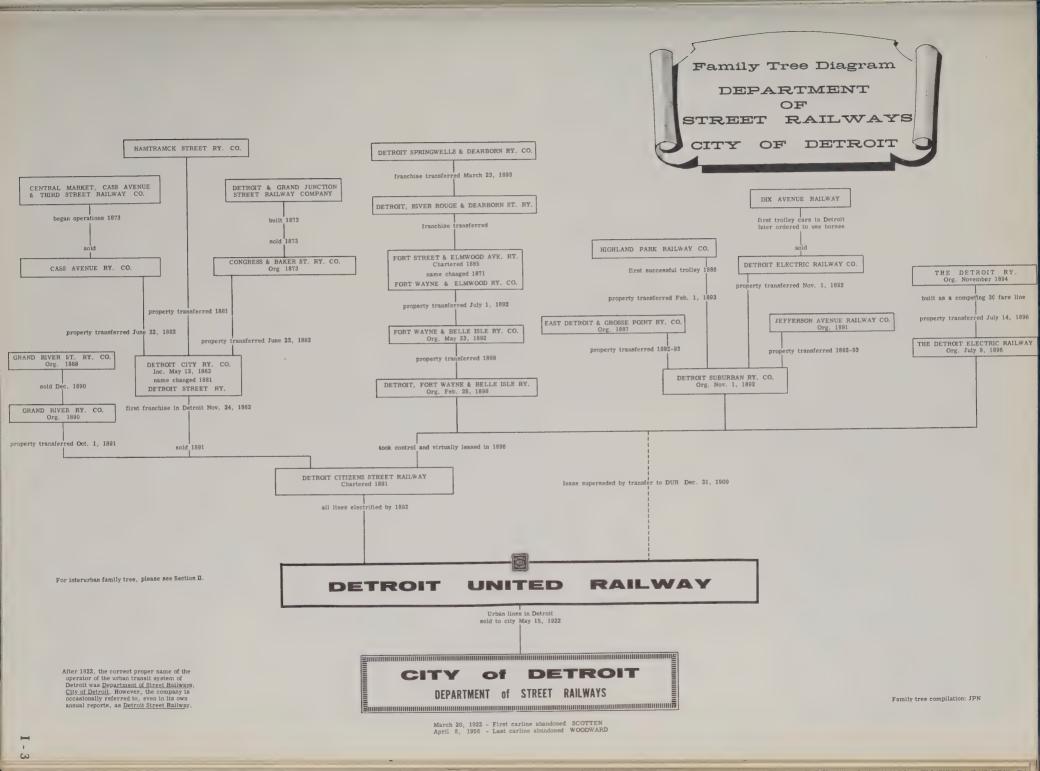
Two cars, #100 and 101, built as a continuation of an order for Pittsburgh, were delivered to Detroit in the same paint job used in the Pennsylvania city. After some test of these samples, an order of 78 additional cars was acquired in 1947.

Changes in the system gradually reduced car needs so that by the 1950s the entire service was operated by PCC car. Then, in 1955, the company decided to convert the balance of the system to bus when it found that Mexico City Tramways would buy the PCC cars for \$3900 each.

The final three abandonments were: Michigan route, September 7, 1955: Gratiot route, March 25, 1956; and, Woodward route, April 8, 1956.

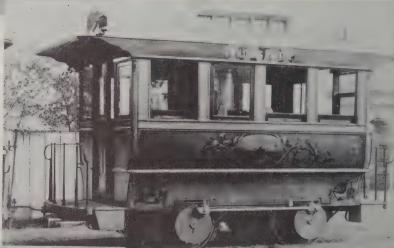
(For additional detail on Detroit street railways, the reader is referred to "A History of Detroit Street Railways", by Graeme O'Geran.)

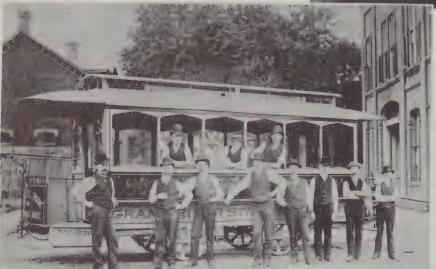






As in many another city, Detroit's street railway system began its operations with a variety of single truckers powered with animals, steam and batteries. A few of these are shown on this page.



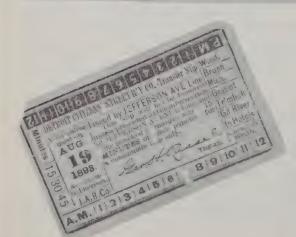


Companies represented here: (from the top down)

Highland Park Ry.

Ft. Wayne & Elmwood Ry Grand River Street Ry.

Ft. Wayne & Elmwood Ry



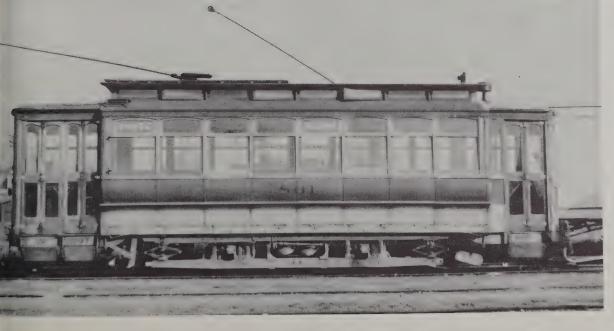




above: Detroit Citizens St. Ry. horse car #202 "Chene".

Right: D.U.R. #1255.
Below: D.U.R. #861 with improved door arrangement and enclosed rear platform,











Ready to begin competition with D.U.R. in earnest, the City of Detroit, Department of Street Railways acquired this pilot group of Peter Witt type (front entrance, center exit) steel car from the Kuhlman plant in Cleveland. At left: #1001 (ultimately one of the low #3200 series.)

The interior appearance and appointments of the new D.S.R. cars was a pleasant! improvement over the monitor-roofer so common then in the city.





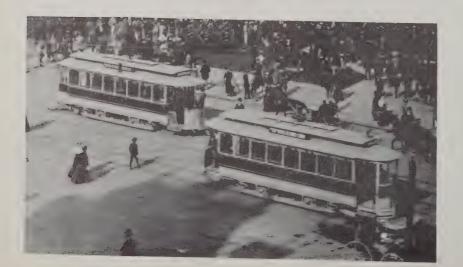
However, the new cars lacked originality in number series, as D.U.R. was operating 1000-series cars of its own, like #1038 shown left.





DSR ran birneys, 1
#194 shown left, fr
1921 until abandonm
of E. Lafayette line
March 1, 1939. Ot
birneys ran on Mt.
liott, Moran-Palm
and Van Dyke lines
til 1938 and on My1
line until 1937.





Above: A spread of Detroit street catransfers covering both Detroit Unite and Department of Street Railways of erations.

Left: Just a nostalgic scene of DUR car #353 and #367 passing in downtown De troit sometime around 1905. (BN



Terminal stage of the rear vestibule city car as far as Detroit was to go is represented in the 3100-class as shown at the right.

Top shows #3123, carrying DSR lettering, outbound from downtown on Woodward. Next down, #3121 is shown with trailer #5246, pulling out of carhouse on Michigan line. For a similar train in Flint, see Section II.

Lower two views show McGuire-Cummings and St. Louis Car Company versions of the DSR standard Peter Witt type of car.

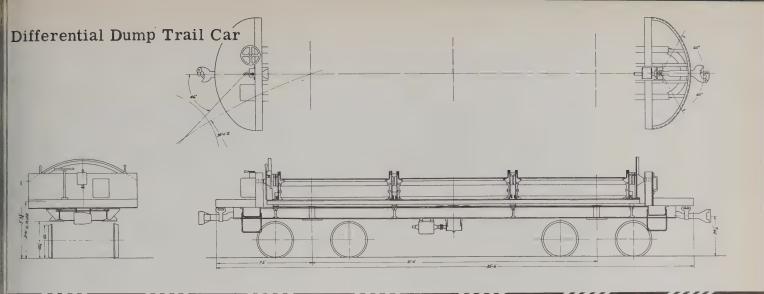




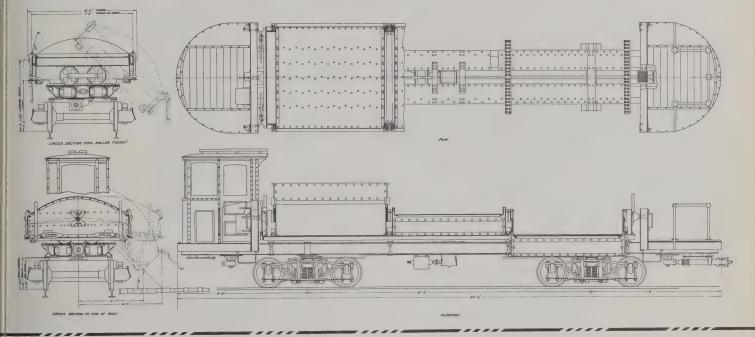




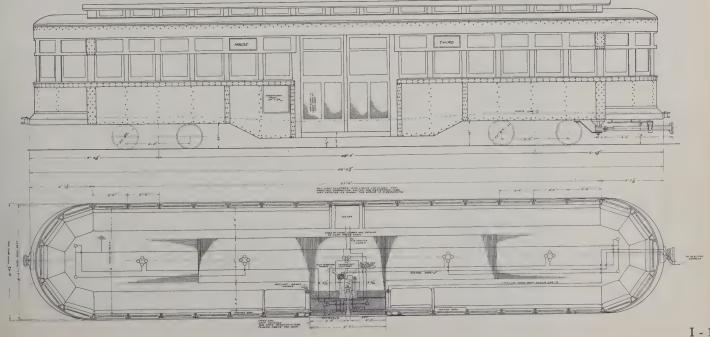


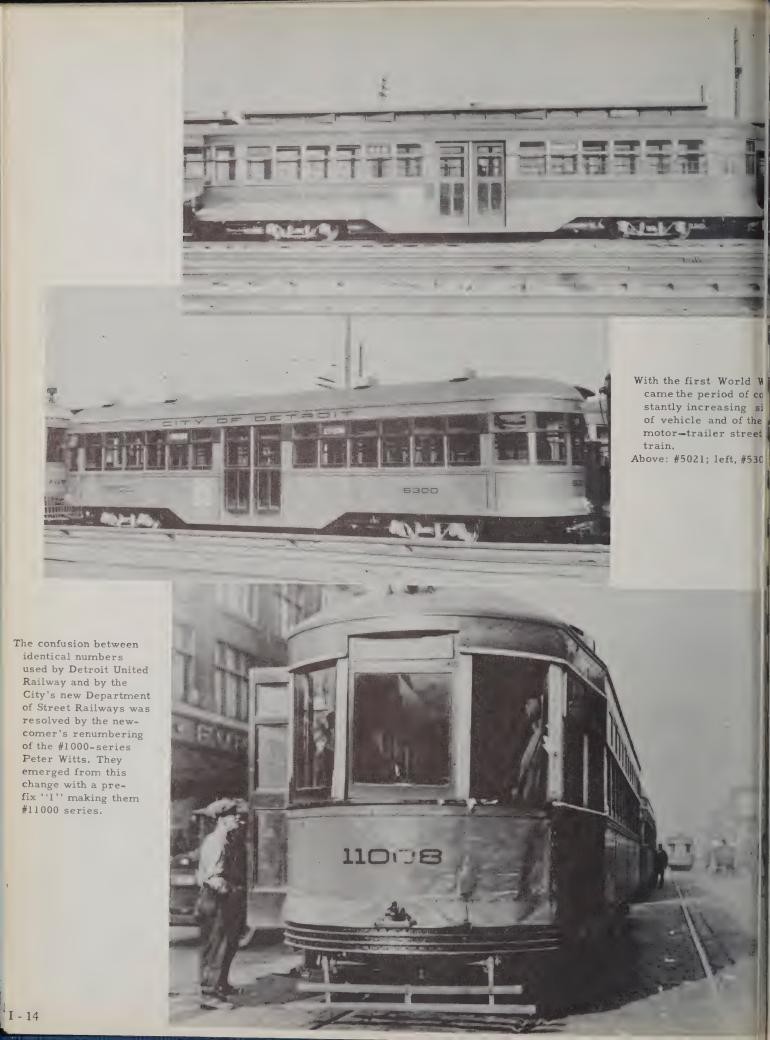


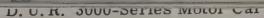
Differential Dump Motor Car

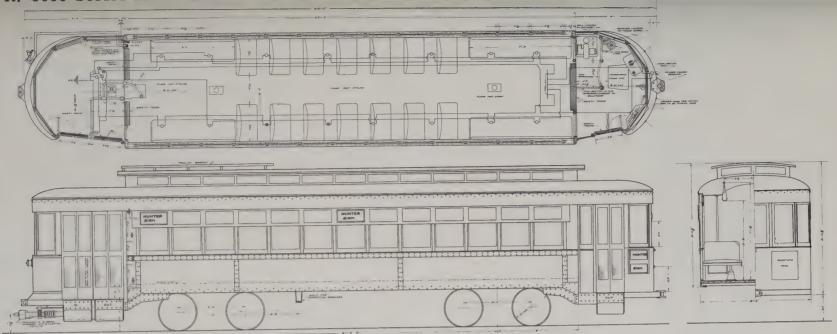


5000-class Passenger Trail Car

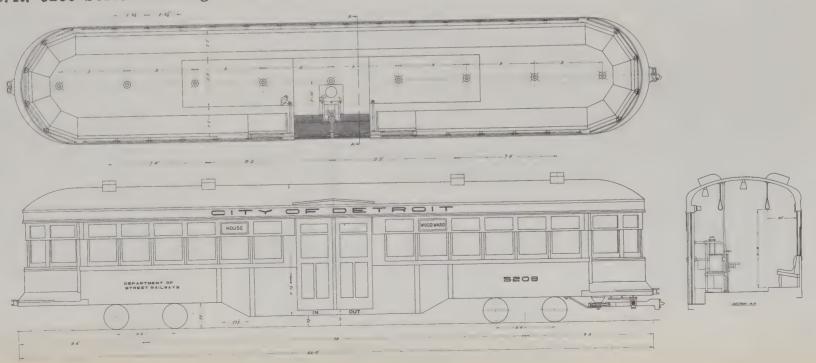




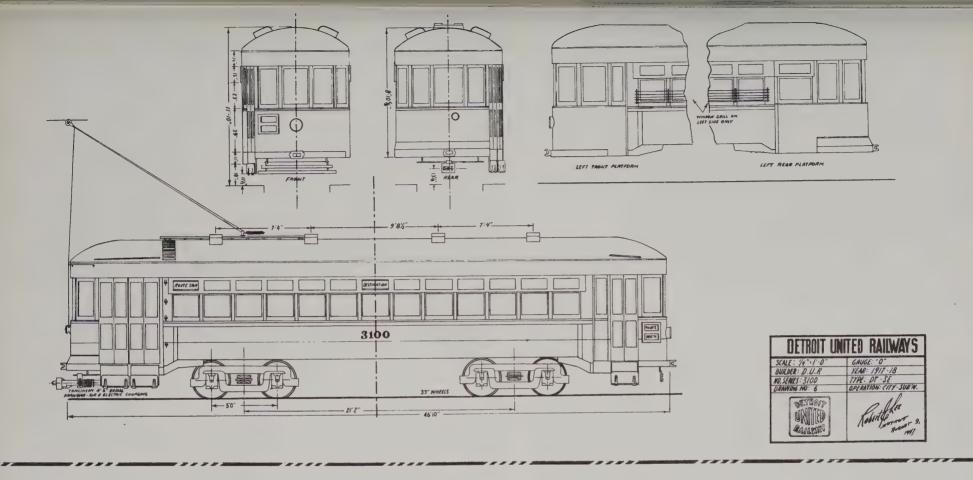


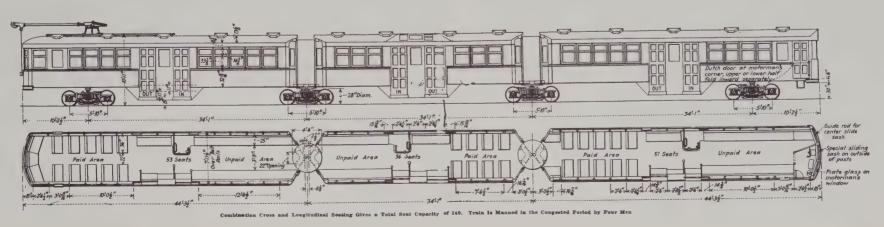


D.S.R. 5200-Series Passenger Trail Car









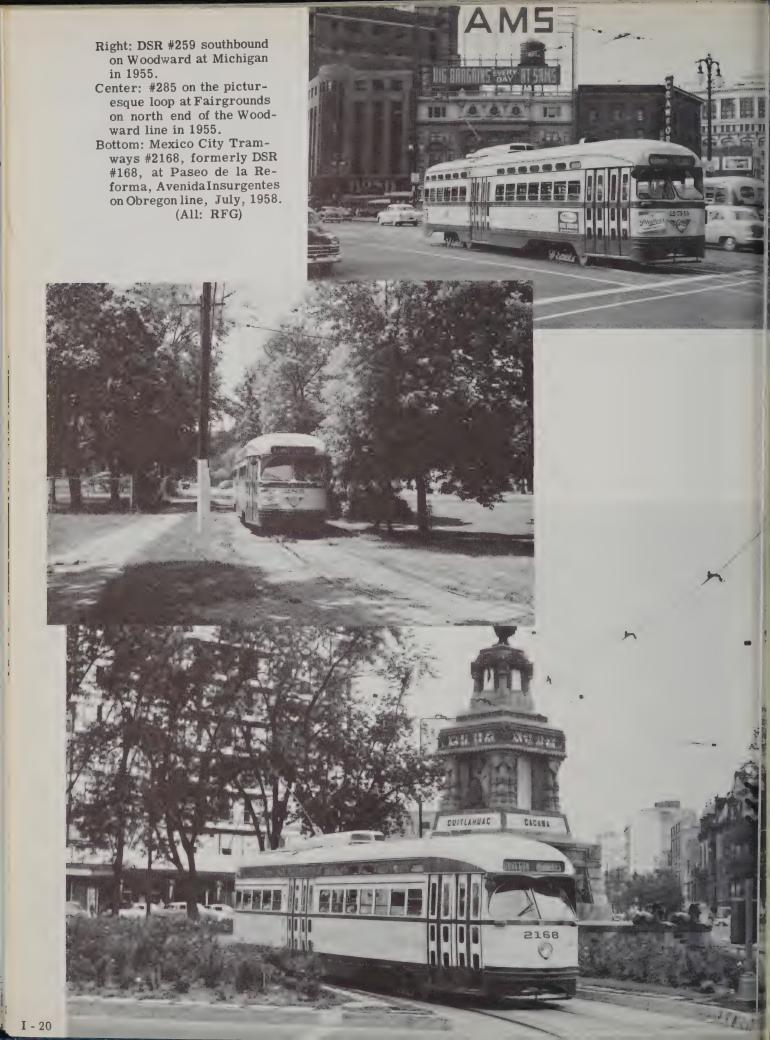
D. S. R. Experimental Articulated Car Originally 5000-5001-5002.

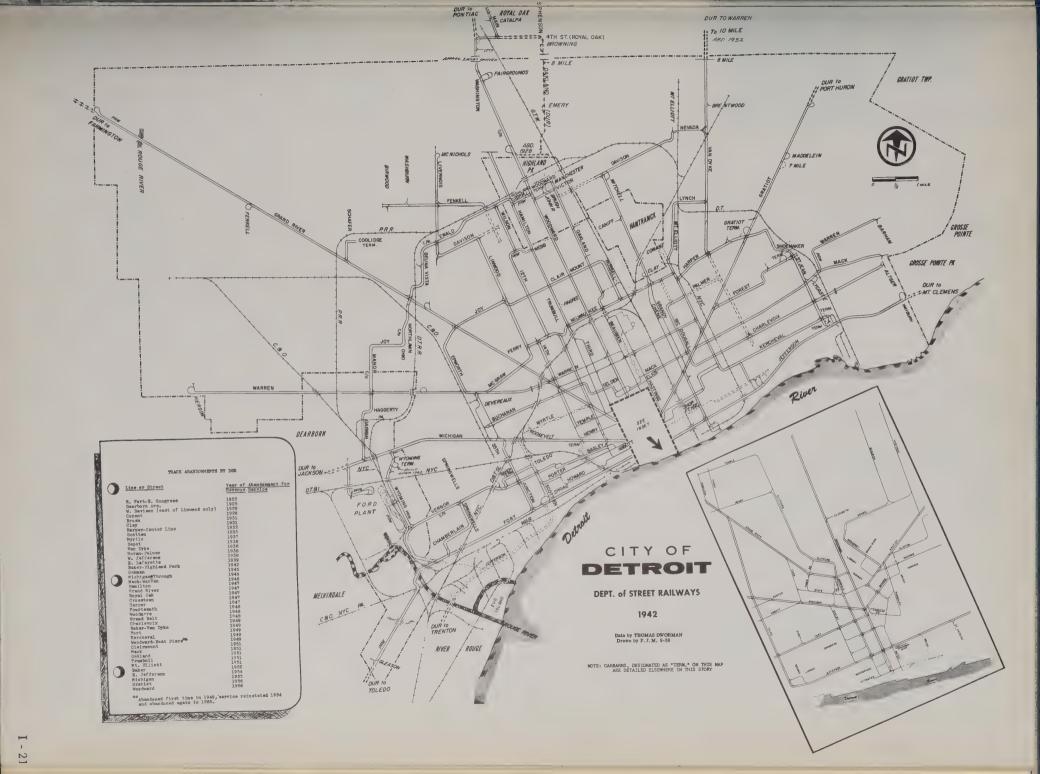


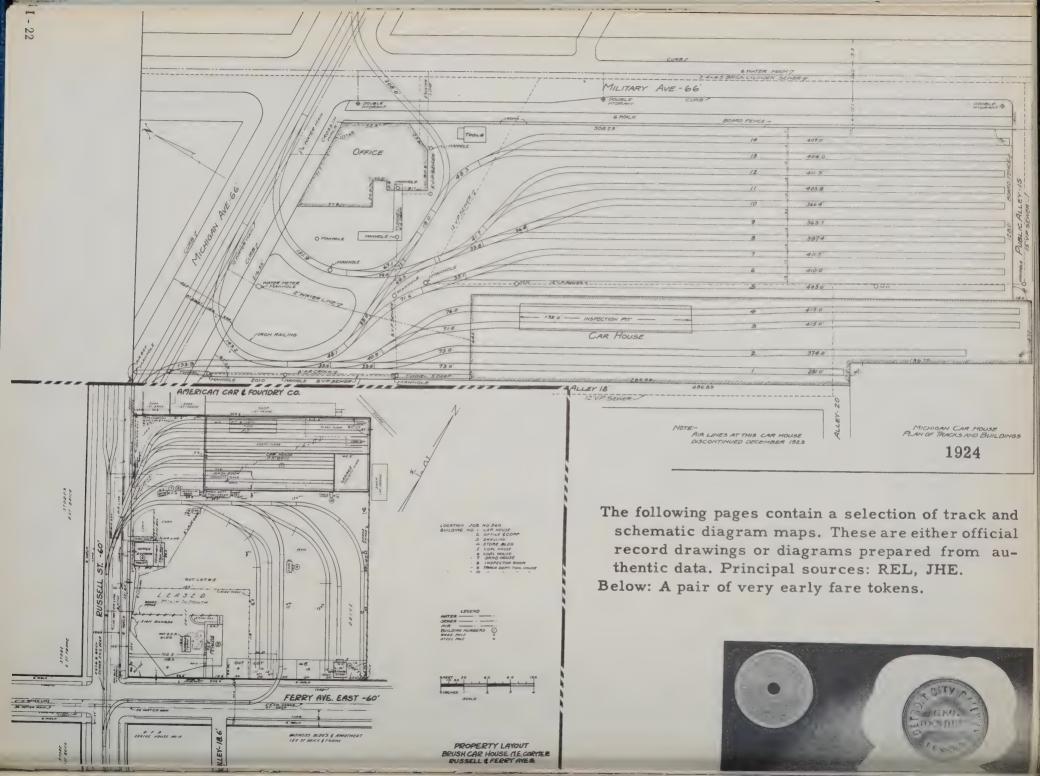
Experimental car #401, sometimes called the "blue streak", was built in 1934, partly from salvage of a birney car. It was 39'-6" in length, 8'-6 3/4" in width and 9'-1" from rail over roof. It a c-commodated 39 seated passengers and had double trucks equipped with 4 Westinghouse #508 motors rebuilt to develop 37 hp at 300 v DC per machine. Brakes were self-lapping pneumatic regulated by foot valve. Controller was type K-35 VV. Bright trolley pole was made of aluminum but carbody was of steel. Total weight of #401 was only 24,000 lb. Operation was by one man crew. While its design elicited much favorable comment at the time, the project was shelved in favor of the more radically improved Presidents' Conference Car development. (GK)

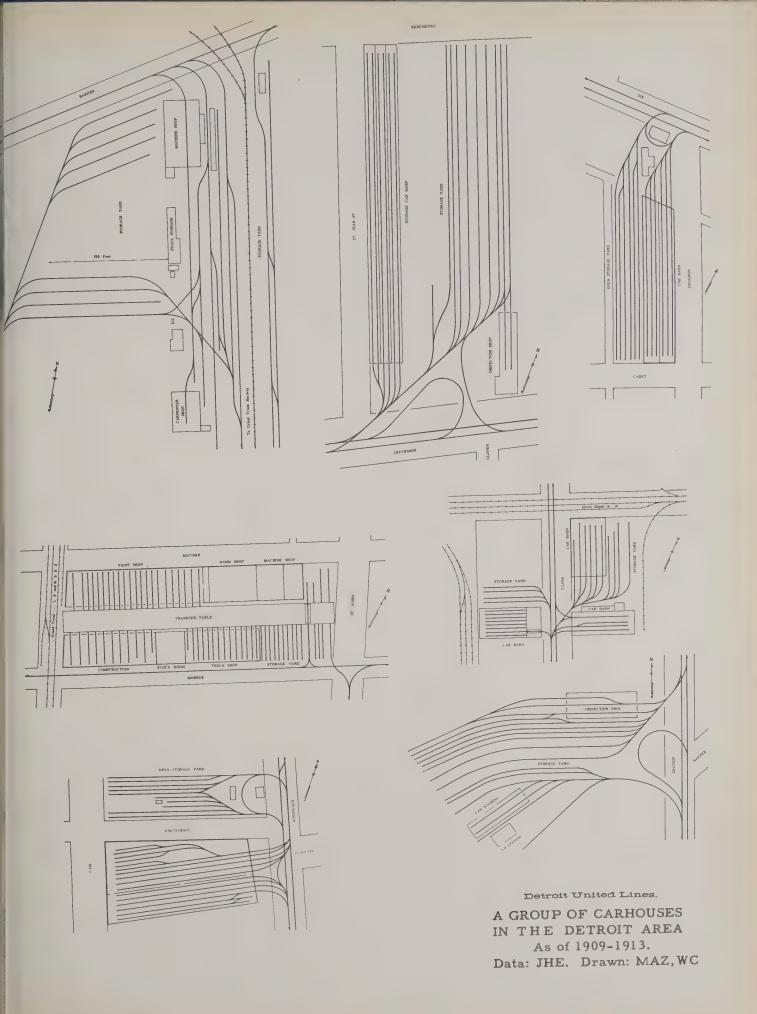


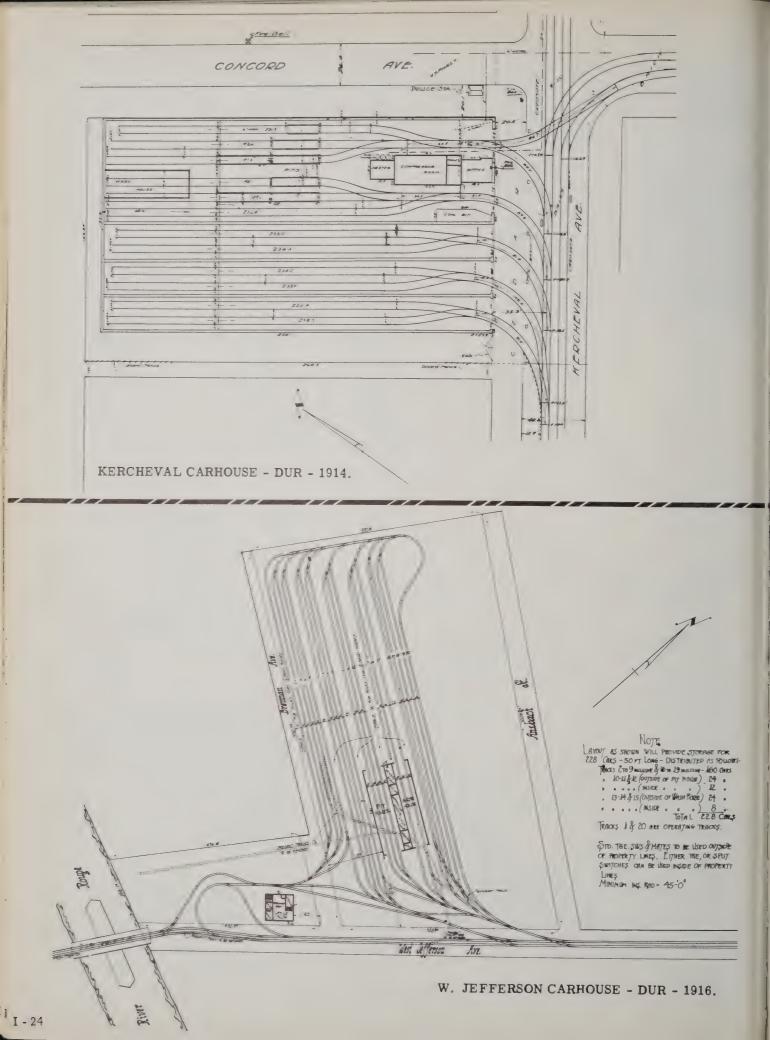


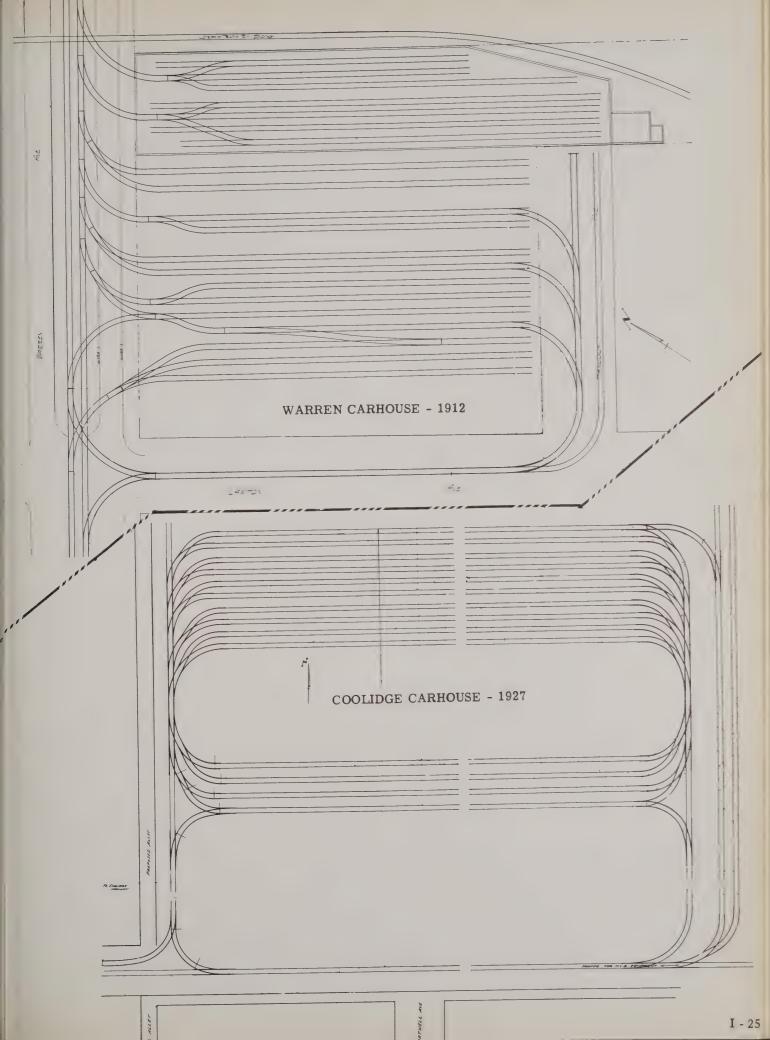


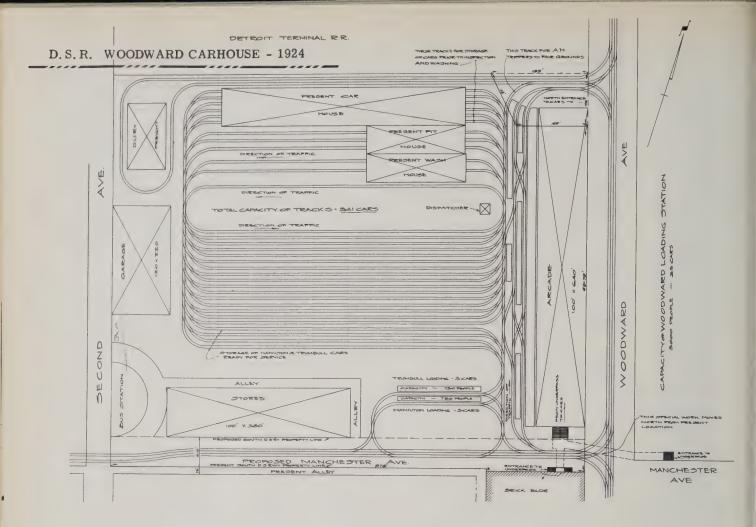


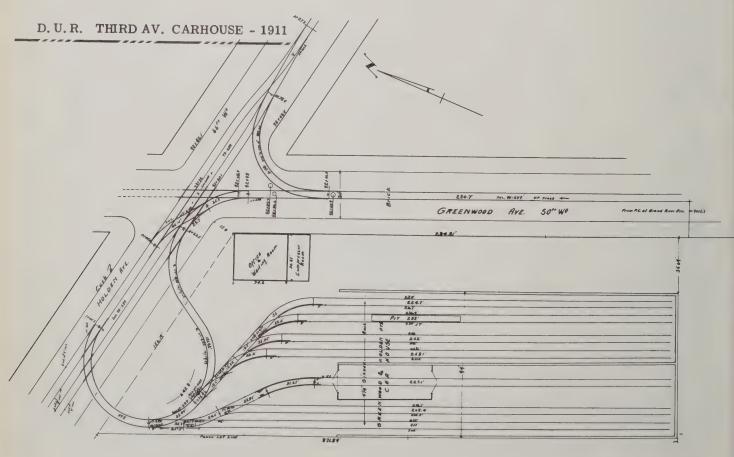




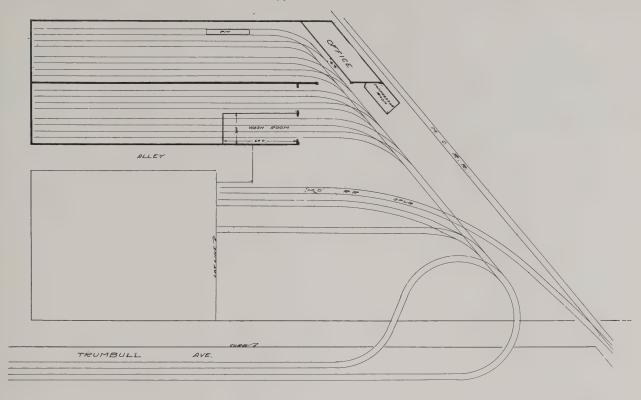




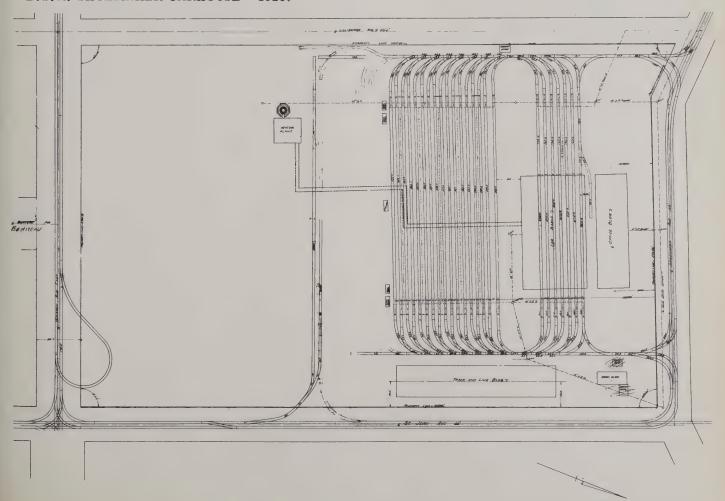


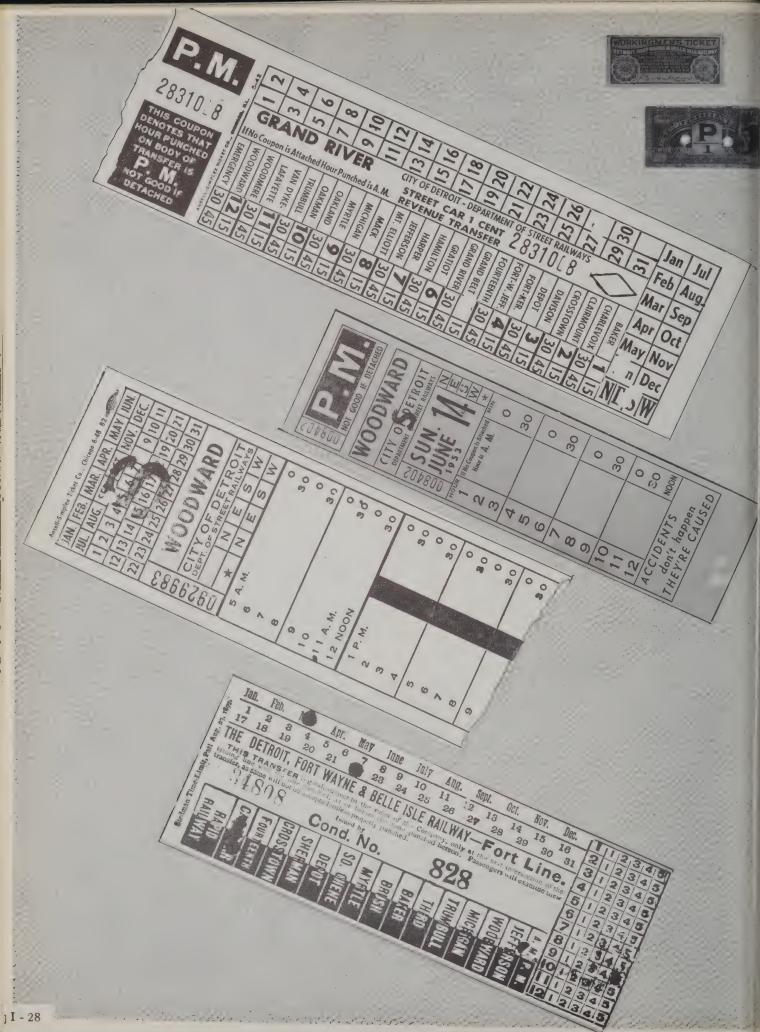


D. U. R. TRUMBULL AV. CARHOUSE - 1910.



D.S.R. SHOEMAKER CARHOUSE - 1923.





Roster of Equipment

DEPARTMENT OF

STREET RAILWAYS

CITY OF DETROIT

and of the Detroit United Railway in Detroit

Data: TD Compilation: JJB, LF

CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF	REMARKS
SINGLE TRU	CK CARS										
42-44	Wells & French		Dupont	2-Steel	2-Steel		21	27'0"			Double end-closed cars
51-75	DUR		Brill 21E	2-S tee. 29	1-Steel		29	34 ' 9 "			Single end-closed cars
76,77,78	Brill		97 71	2-Steel D			25	31'10"			n n n n
86,87,92 93,95 - 97	Jones		Dupont	11	K-12		21	26'0"			
101	DUR		11	2WH49	K - 28		29	36'8"			93 to pay car, 95 to line car. First "Yolande", sightseeing car Rebuilt for regular service.
102-175	St.Louis		11	2WH68	K-12		30	30'10"			Single end cars with front, center and rear doors.
176	DUR		Brill	2-Stee: 29	l-Steel		29	34 ' 9"			Single end closed car
177-203	Kuhlman		Dupont	11	11		30	3019"			Same as 102-175 class.
204-242	DUR		11	11	11		29	34 ' 9"			Single end closed cars.
243-246	Brill		Brill 21E	2-Stee. D	2-Steel		21	27'0"			Double " "
247-271	DUR		11 11	2-Stee 29	1-Steel		29	34 1 9 11			Single end closed cars
272-277	Jackson and Sharp		11 11	2-Stee D	"		25	3217"			п п п
278-279	Brill		ji li	0	11		25	31'10"			11 11 11
281-286 294-295	Lewis & Fowler		Dupont	17	11		25	31'1"			n n n n
287 - 293 296 - 299	Jones		Brill 21E	11	н		25	3210"			" ", 287 DE car.
300	DUR		Dupont	2-Stee 29	- 0		29	3419"			н н н н
301-385	Stephenson		It	2-Stee	07		26	3312"			11 11 11
386-391	Brill		Brill 21E	11	11		25	31'10"			и и и
392-400	DUR		Dupont	2-Stee 29	It		29	3419"			# B # #
401-434	Pullman		Brill 21E	2-Stee D	"		23	29'1"			415,423,426,434 rebuilt 32'1" long.
437-440	Brownell		Dupont	11	2-Steel		23	3018"			Double end closed cars.
441-455	Stephenson		Brill	11	1-Steel		23	31'5"			Single end closed cars.
456-461,473 474,484-493	Jones		Brill 21E	11	11		25_	3210"			493 to tool car. Single end closed cars.
462 - 467 480 - 483	Lewis & Fowler		Dupont	II .	11		25	31'1"			482 to work car
469-472,475	Brill		Brill 21E	11	11		25	31'10"			Single end closed cars.
501-550	Stephenson		Dupont	2-Stee 29	2-Steel		48	2814"			 Double end 10 bench open cars.
551-600	Pullman		И	17	1-Steel		45	3015"			Single end 9 bench open cars.
601-700	Stephenson		#1	17	11		50	3210"		-	Single end 10 bench convertible cars.
701-738	Jones		11	TI	11		50	3312"			Single end 10 bench open cars.
739-768	Brill		П	n	- 11		50	3319#			Single end 10 bench open cars.
770-779	St.Louis		н	2-Stee D	1 "		50	3312#			n n n n
780-785	Brill		**	#	"		50	31'3"			U H U U H
786-825	DUR		11	2-Stee 29	1 "		60	3416"			Single end 12 bench open cars.
851-899	Cincinnati	112									Single end closed cars.
900-999	American	112	II Doğumlar								Most of this series acquired by DSR.
1002-1025	DUR		Brill Dupont	2WH49			29	3419"			Single end closed cars.
1250-1273	n	1.50	11	2WH38B	1-Steel		30	34 19"			11 11 11
1274-1329	Cincinnati	105		2WH93A	K-12		30	34 '9"			п и о и

CAR NUMBER	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF	REMARKS
DOUBLE TRU	CK CARS					,	_				Double end 14 bench open cars, rebuilt
826-845	Stephenson	101	St.Louis 47	4WH12A	K-6			42'1"		-	1907 to closed cars by Kuhlman. Double end sightseeing car.
1026	DUR		Brill_27	4WH56	K-14		53	51'3"			Open platform rear end.
1027	н		Dunont	4-Stee	K=14		38	4414"			Funeral car
1028-1051	St.Louis	103	Brill 27F	2GE57	K12		36	40'8"			Single end - deck roof
1053-1072	St.Louis	103	Brill 27	2GE57	K12		40	41'4"			91 91 99 M
1074-1097	St.Louis	103	St.Louis47	2GE57	K12		40	41'4"			SE - DR, some to DSR Had 2WH56 motors and KI2 controls
1103-1152	Brill	104	Std 0-50 Brill 27F Std 0-50	2GE203 2GE210	K35G		40	41'4"			Sold to DSR. Had 2WH56 motors and KI2 controls
1153-1202	Brill	105	Brill 2/F	20E210	K35G		40	41'4"			Sold to DSR. Some cars 2WH310 motors
1203-1227	Kuhlman	108	Std O-50 Brill 27F	2GE203 2GE210	K35G		40	41'4"			Had 2WH93 motors and K12 controls Sold to DSR, Some cars 2WH310 motors
1375-1424	Kuhlman	'13	Std O-50 Brill	4GE203	K35		45	4213"			Sold to DSR.
1425-1474	Kuhlman	'13	Std 0-50	4GE203	K35		45	4213"			Sold to DSR.
	Kuhlman	'12	Std O-50 Brill	4GE203	K35		45	4213#			Sold to DSR.
1475-1524			Std 0-50	4GE203			45	4213"			Sold to DSR.
1525-1609	Kuhlman	'11	Brill Std O-50	4GE210	K35		45	4213"	813"	11'10"	Sold to DSR.
1610-1624	Niles	'11	Brill Std 0-50	4GE210 4GE203	K35						Sold to DSR. Some cars 4WH310 motors
1625-1649	Niles	'10	Brill Std O-50	4GE210	K35		45	4213"	813"	11'10"	
1650-1699	Kuhlman	110	Brill	4WH310	K35		45	4213"			Sold to DSR. Few cars GE203 & GE210. Had 2W93A2 motors and KI2 control.
1700-1749	Cincinnati	107	Std 0-50 Std 0-50	4GE203 4WH310	K35		40	41'4"			Sold to DSR. 1724 to money car.
1750-1799	Cincinnati	110		4GE210	K35		45	4213"		-	Sold to DSR. Few cars GE203 motors.
3000-3024	Kuhlman	115	Brill 27F Std 0-50	4GE203	K35		46	46'10"	812"	12'7"	Sold to DSR. Deck roof cars.
3025-3049	Kuhlman	116	Brill 27F	4GE203	K35		46	46'10"	812"	12'7"	Sold to DSR. " " "
3050-3099	Kuhlman	117	Std O-50 Brill 27F	4GE203	K35		46	46'10"	812"	12'7"	Sold to DSR. " " "
3100-3125	DUR	119	Std 0-50	4GE203	K35G	46,800	46	46'8.	812"	11'10"	Sold to DSR. Arch roof cars.
3126	DSR	124	Std 0-50	4GE203	K35		46				Arch roof car
DOUBLE TRU	CK TRAILERS										
5000-5049	Kuhlman	115	Brill Arch Bar	Trail		27,275	57	4619"	8'10"	11'0"	Deck roof cars
5050-5099	Kuhlman	116	Brill	Trail		26,800		4710"			
5100-5149	Kuhlman	116	Brill 67F	Trail		26,800					
5150-5199	Kuhlman	117	Brill 67F	Trail		27,260					
5200-5223	DUR	120	Standard	Trail		28,000		46'8"			Arch roof cars, 5224-5249 retained by DUR for use in Flint.
5300-5349	DSR	123		Trail			55	48'0"			by Don for use in Filint.
	D FROM CLEVELA			11911			55	-+0 0		4	
747-757 761-773	Brill	100						1			All cars odd numbers only. Deck roof
779-783											Motor cars. Leased in 1927 for service on Baker line. Retired in 1931.
787-799	Brill	100								+	Never returned, scrapped in Detroit.
2200-2220		113	Brill.	Trail		18,600		49'0"		 	Railroad roof, used with above motors
DUR SERVICE	E CARS							-		1	
8	DUR		McGuire	None	None			16'1"			Single truck pile driver
10	99		11	# 2-Steel	11			17'4"			Single truck air compressor car.
20	н			D 4-Steel				13'6"			Single truck rail grinder car.
21	11		14B	4-Steel				23'0"			Double truck concrete mixer.
26				None	None			3014"			Double truck flat car
49	Brill		Dupont	2-Steel	K-28			24 10"			Single truck wrecker, ex pass car.
1000	DUR		14A	4-Steel 34	K-14			4514"			Double truck air compressor car.
1001	n			4WH93A	11			3219"			Single truck supply car.
1800	Kuhlman		Peckham	4WH56	н			37'0"			Double truck plow and work car.
1801,1834-6	DUR		Diamond	None	None			36'1"			Double truck flat cars.
1839,1844 1852,1854 1856-1860	60		II II	n	11			H 1			" " " "
1802-1808	н		Dupont	2-Steel	₹-34A			21 ' 3"			
1809-1810	91		n	D H	K-34A			22'5"			Single truck plow and work cars.
1812-1813 1864-1865	11		11	11	112			2215"			Single truck sprinklers,3700 gallons.
1917-1918 1921-1922	t)										н н н н
1011 1014	,,		11	11	11			10			19 91 99 19
1811,1814											
1811,1814 1868 1815,1825 1866	н		er	11	l-Steel			20'10"			Single truck crane cars.

CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF			REMARKS	
DUR WORK 1817,1826	CARS, Cont'd.													
1829-1832 1846 1897-1901	Russell "		Diamond "	None	None "			3014"					Ballast and gravel cars.	
1818-1820 1828,1833	DUR		McGuire	n	11			16'11"					Single truck flat cars.	
1821	11		Dupont	2-Steel D	K-28			14'5"					Single truck switcher.	
1822	Kuhlman		Brill					19'1"					Single truck scraper.	
1823	DUR		Dupont	2- Walker	1-Steel			15'6"					Single truck work car.	
1824	Kuhlman		Brill	2-Steel D	K-34A			1719"					Single truck plow.	
1845,1879 1886-1890	Russell		Diamond	None	None			30 '4"					Single truck flat cars.	
1892,1895 1896	19		H	11	II .			н					11 11 11 11	
1847-8,1862 1863-1865	DUR		McGuire	None	None			16'4"					71 11 11	
1853	Kuhlman	106	Dupont	4WH38	K-14			3710"					Double truck plow and work car.	
1867	DUR		11	2-Steel D	K-34A			2219"					Single truck plow and work car.	
1869	11		Diamond	1-Steel D				33'6"					Concrete mixer	
1870	Ħ		Jackson and Sharp					3313"					Double truck concrete mixer	
1872-1874	11			None	None			36'1"					Double truck flat cars	
1876	11	-	Dupont	2-Steel	.K-12			22'3"					Single truck sand car.	
1878	н		11	None	None			21'10"					п н п	
1880	11		St.Louis 47	4WH38B	K-14			40'8"					Double truck construction car.	
1894	Jackson and Sharp		Jackson and Sharp	2WH68	K-11			3312"					Double truck line car.	
1902-1904			Brill 21E	None	None			2010"					Single truck flat car.	
1906			Dupont	2-Steel D	K-12			21'10"					Single truck emergency car.	
5264	DUR		11	11 2	2-Steel D			21'0"					Single truck line car.	
J204						1		1				1		
7286	Jackson and Sharp		11	Walker	l-Steel			2712"					Single truck switcher.	
	Jackson and Sharp DUR	103	#1 #1	Walker 2-Steel D	l-Steel K-34			914"					Single truck switcher. Single truck shop switcher Became DSR X76.	
7286	DUR	103	 	Walker 2-Steel									Single truck shop switcher	
7286 "TEDDY"	DUR FOR DSR	103	 	Walker 2-Steel									Single truck shop switcher	
7286 "TEDDY" CARS BUILT	DUR FOR DSR		 	Walker 2-Steel		16,000	32		7' 10"	10' 10'			Single truck shop switcher	
7286 "TEDDY" CARS BUILT BIRNEY CAF	DUR FOR DSR		OB 25-96	Walker 2-Steel D	K-34	16,000	32	91411	7' 10"	10, 10,			Single truck shop switcher Became DSR X76.	
7286 "TEDDY" CARS BUILT BIRNEY CAF	DUR FOR DSR S Osqood-Bradley	121	OB 25-96	Walker 2-Steel D 2GE264 2WH508A	K-34			914H					Single truck shop switcher	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149	DUR FOR DSR IS Osqood-Bradley	'21 '21 '21	OB 25-96	Walker 2-Steel D 2GE264 2WH508A	K-34 K63BR	16.800	32	914H	11	99			Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs	'21 '21 '21	OB 25-96	Walker 2-Steel D 2GE264 2WH508A	K-34 K63BR n	16.800 16.600	32 32 32	914H	7'11"	99			Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs	'21 '21 '21 '21	OB 25-96 " Brill 79El	Walker 2-Steel D 2GE264 2WH508A 2GE264 2WH508A	K-34 K63BR n	16.800 16.600	32 32 32 32	91411 281 011 11	7'11"	10181			Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324	DUR FOR DSR Osqood-Bradley Brill McGuire-Cum'qs St. Louis	'21 '21 '21 '21	OB 25-96 " Brill 79El	Walker 2-Steel D 2GE264 2WH508A 2GE264 2WH508A	K-34 K63BR n n	16,800 16,600 16,000	32 32 32 32	914 ⁿ 28 [†] 0 ⁿ n 28 [†] 0 ⁿ	7'11"	10 '8" 9 '10"			Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324	DUR FOR DSR S Osqood-Bradley Brill McGuire-Cum'qs St. Louis Osqood-Bradley	'21 '21 '21 '21	OB 25-96 " Brill 79El	Walker 2-Steel D 2GE264 2WH508A 2GE264 2WH508A	K-34 K63BR n n	16,800 16,600 16,000	32 32 32 32	914 ⁿ 28 [†] 0 ⁿ n 28 [†] 0 ⁿ	7'11"	10 '8" 9 '10"			Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT	DUR FOR DSR S Osqood-Bradley Brill McGuire-Cum'qs St. Louis Osqood-Bradley	'21 '21 '21 '21	OB 25-96 " Brill 79El	2GE264 2WH508A 2GE264 2WH508A 8	K-34 K63BR n n	16,800 16,600 16,000	32 32 32 32	914 ⁿ 28 [†] 0 ⁿ n 28 [†] 0 ⁿ	7'11"	10 '8" 9 '10"	1		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT	DUR FOR DSR S Osqood-Bradley " Brill McGuire-Cum'qs St. Louis Osqood-Bradley	'21 '21 '21 '21	OB 25-96 " Brill 79El St.Louis OB 25-96	Walker 2-Steel 2GE264 2WH508A 2GE264 2WH508A "	K-34 K63BR n n	16,800 16,600 16,000 "	32 32 32 32 32 32	9141 28101 11	n 7:11" 8:3" 7:10"	9'10"			Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT	DUR FOR DSR S Osqood-Bradley " Brill McGuire-Cum'qs St. Louis Osqood-Bradley	'21 '21 '21 '21	OB 25-96 " Brill 79El St.Louis OB 25-96	2GE264 2WH508A 2GE264 2WH508A 8 GE265	K63BR n n n K35=62	16,800 16,000 " 16,800	32 32 32 32 32	9141 28101 11	n 7:11" 8:3" 7:10"	9'10"	1 2		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Org. 1000 series, 11000 series in 192; 3200 series in 1923. 3223 to type 2 in 1922. 3248 converted to "Hot Rod"	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs St. Louis Osgood-Bradley	121 121 121 121 121 121	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El	Walker 2-Steel D 2GE264 2WH508A W GE265	K63BR n n n K35=62	16,800 16,000 " 16,800	32 32 32 32 32 32 56	914H 281 OH H 2810H H 4811H	8'3" 7'10" 8'2"	11'0" 10'8"	1 2 2		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Org. 1000 series, 11000 series in 192: 3200 series in 1923. 3223 to type 2 in 1922. 3248 converted to "Hot Rod"	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3349	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs St. Louis Osgood-Bradley CARS Kuhlman	'21 '21 '21 '21 '21 '21 '21 '21 '23	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El	Walker 2-Steel D 2GE264 2WH508A " GE265 " W1510 WH 508	K63BR n n K635-62 K35-HH	16,800 16,600 16,000 " 16,800 36,000	32 32 32 32 32 32 56	9141 281 01 11 28101 11 48111	8'3" 7'10" 8'2" 8'5"	9'10" 10'10"			Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Drg. 1000 series,11000 series in 1923 3200 series in 1923, 3223 to type 2 in 1922, 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349	DUR FOR DSR S Osqood-Bradley " Brill McGuire-Cum'qs St. Louis Osgood-Bradley " CARS Kuhlman " St. Louis	'21 '21 '21 '21 '21 '21 '21 '21 '23	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El "Taylor "	2GE264 2WH508A 2GE264 2WH508A 8 GE265 WH510 WH 508 GE265	K63BR n n n K35-62 K35-HH	16,800 16,600 16,000 " 16,800 36,000	32 32 32 32 32 56 50 52	9141 28101 11 28101 11 48111 48151	8'3" 7'10" 8'2" 8'5" "	9'10" 10'10" 10'10"	2		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Drg. 1000 series,11000 series in 1923 3200 series in 1923, 3223 to type 2 in 1922, 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3250-3349 3350-3424 3425-3449	DUR FOR DSR S Osqood-Bradley " Brill McGuire-Cum'qs St. Louis Osqood-Bradley " CARS Kuhlman " St. Louis McGuire-Cum'qs	'21 '21 '21 '21 '21 '21 '23 '23 '23 '24	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El "Taylor "	Walker 2-Steel 2GE264 2WH508A 8 2GE264 2WH508A 8 9 GE265 8 WH510 WH 508 GE265	K63BR n n n K35-62 K35-HH n	16,800 16,600 16,000 " 16,800 36,000	32 32 32 32 32 32 56 50 52 52 "50	9141 28101 11 28101 11 48111 11	8'3" 7'10" 8'2" 8'5" "	9'10" 10'10" 11'0" 10'10" "	2		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Drg. 1000 series,11000 series in 192 3200 series in 1923, 3223 to type 2 in 1922, 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3250-3349 3350-3424 3425-3449 3450-3499 3500-3549	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs St. Louis Osgood-Bradley CARS Kuhlman " St. Louis McGuire-Cum'qs	'21 '21 '21 '21 '21 '21 '21 '23 '23 '24 '24	OB 25-96 Brill 79Fl St.Louis OB 25-96 Brill 77Fl "Taylor "Cincinnati	Walker 2-Steel D 2GE264 2WH508A 2GE265 " WH510 WH 508 GE265	K63BR n n n K35-62 K35-HH n	16,800 16,600 16,000 " 16,800 36,000 37,660 "	32 32 32 32 32 56 50 52 50 52	2810n n 2810n n 4811n	8'3" 7'10" 8'2" 8'5" "	10'8" 9'10" 10'10" 11'0" "	2 2 2		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Drg. 1000 series,11000 series in 1923 3200 series in 1923, 3223 to type 2 in 1922, 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3349 3450-349 3450-3499 3500-3549	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs St. Louis Osgood-Bradley CARS Kuhlman " St. Louis McGuire-Cum'qs	'21 '21 '21 '21 '21 '21 '21 '23 '23 '24 '24	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El Taylor Cincinnati Taylor	Walker 2-Steel D 2GE264 2WH508A 2GE265 " WH510 WH 508 GE265 " "	K63BR n n n K35=62 K35=HH n	16,800 16,000 " 16,800 36,000 37,660 " 37,320 36,000	32 32 32 32 32 56 50 52 50 52 52	281 On n 281 On w 4811 4815 n n	8'3" 7'11" 8'3" 7'10" 8'5" " "	10°10° 10°10° 10°10° 10°10°	2 2 2		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Drg. 1000 series,11000 series in 1923 3200 series in 1923, 3223 to type 2 in 1922, 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32	
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7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3424 3425-3449 3450-3499 3500-3549 3500-3549 3600-3624	DUR FOR DSR S Osqood-Bradley " Brill McGuire-Cum'qs St. Louis Osqood-Bradley " CARS Kuhlman " St. Louis McGuire-Cum'qs " Osgood-Bradley " St. Louis	'21 '21 '21 '21 '21 '21 '21 '21 '22 '24 '24 '24	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El "Taylor "Cincinnati Taylor "St. Louis Stand.35Pl	Walker 2-Steel D 2GE264 2WH508A " GE265 " WH510 WH 508 GE265 " WH510 GE265 WH510E WH510E	K63BR n n n n n n n n n n n n n	16,800 16,600 16,000 " 16,800 37,660 " 37,320 36,000 "	32 32 32 32 32 32 56 50 52 52 52 52 52 52	9141 28101 11 28101 11 48111 11 11 11	813" 711" 813" 7110" 812" 815" " " " " "	10'8" 9'10" 10'10" 10'10" " " " "	2 2 2 2 2 2		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Org. 1000 series,11000 series in 192 3200 series in 1923. 3223 to type 2 in 1922. 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line. 3571,3574 converted to Type 4. 3619,3620 converted to modified	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3349 3350-3424 3425-3449 3450-3499 3500-3549	DUR FOR DSR S Osgood-Bradley " Brill McGuire-Cum'qs St. Louis CARS Kuhlman " St. Louis McGuire-Cum'qs " Osgood-Bradley " Cand Commings	'21 '21 '21 '21 '21 '21 '21 '23 '23 '23 '24 '24 '24 '24 '24	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El Taylor Cincinnati Taylor St. Louis Stand.35El Brill 177	Walker 2-Steel D 2GE264 2WH508A 2GE264 2WH508A " " GE265 " WH510 GE265 " WH510 GE265 " WH510 GE265 WH510F	K63BR n n n n n n K35=62 K35=HH n n K35A	16,800 16,600 16,000 " 16,800 36,000 37,660 " 37,320 36,000 " 37,320 36,000	32 32 32 32 32 32 56 50 52 50 52 52 52 52 52 52	28† 0 ⁿ n 28†0 ⁿ n 48†1 ⁿ n n n n n	813" 7110" 813" 710" 812" 815" " " " " "	10'8" 9'10" 10'10" 11'0" " " " " " " "	2 2 2 2 2 2 2 3		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Org. 1000 series,11000 series in 1923 3200 series in 1923, 3223 to type 2 in 1922, 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line. 3571,3574 converted to Type 4. 3619,3620 converted to modified	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3424 3425-3449 3450-3499 3550-3599 3600-3624 3625-3654	DUR FOR DSR S Osgood-Bradley " Brill McGuire-Cum'qs St. Louis Osgood-Bradley CARS Kuhlman " St. Louis McGuire-Cum'qs " Osgood-Bradley McGuire-Cum'qs Kuhlman Kuhlman Kuhlman Kuhlman Kuhlman Kuhlman	'21 '21 '21 '21 '21 '21 '21 '21 '22 '23 '23 '24 '24 '24 '24 '27 '27 '27	OB 25-96 Brill 79El St.Louis OB 25-96 Brill 77El Taylor Cincinnati Taylor St. Louis Stand.35El Brill 177	Walker 2-Steel D 2GE264 2WH508A 2GE264 2WH508A " " GE265 " WH510 GE265 " WH510 GE265 " WH510 GE265 WH510F	K63BR n n n n n K35-62 K35-HH n n K35A n	16,800 16,600 16,000 " 16,800 36,000 37,660 " 37,320 36,000 " 37,320 36,750 37,580	32 32 32 32 32 32 56 50 52 52 52 52 52 52 52	281 On n 281 On n 48111 4815 n n n n	813" 7110" 813" 710" 812" 815" " " " " " "	10'8" 10'10" 11'0" 10'10" 10'10" 10'10"	2 2 2 2 2 2 2 3		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Org. 1000 series,11000 series in 1923 3200 series in 1923. 3223 to type 2 in 1922. 3248 converted to "Hot Rod" 3272.3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line. 3571,3574 converted to Type 4. 3619,3620 converted to modified Type 4.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3349 3450-349 3450-349 3550-3599 3600-3624 3625-3654 3655-3699 3700-3749	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs St. Louis Osgood-Bradley CARS Kuhlman " St. Louis McGuire-Cum'qs " Dsgood-Bradley McGuire-Cum'qs St. Louis Cummings Kuhlman St. Louis	121 121 121 122 123 123 124 124 127 127 129	OB 25-96 "Brill 79El St.Louis OB 25-96 Brill 77El "Taylor "Cincinnati Taylor "St. Louis Stand.35Pl Brill 177 St. Louis	Walker 2-Steel D 2GE264 2WH508A 2GE265 WH510 WH 508 GE265 WH510 GE265 WH510 GE265 WH510 GE265 WH510 GE265	K63BR n n n n n n n K35–62 K35–HH n n n n	16,800 16,600 16,000 " 16,800 37,660 " 37,320 36,000 " 36,750 37,580 37,140 36,060	32 32 32 32 32 32 56 50 52 52 52 52 52 52 52 52 52 52	281 On n 281 On n 4811n 4815n n n n n	813" 711" 813" 710" 815" 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 *8" 9 *10" 10 *10" 10 *10" " " " " " " " " " "	2 2 2 2 2 2 2 3 4		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Drg. 1000 series,11000 series in 192 3200 series in 1923. 3223 to type 2 in 1922. 3248 converted to "Hot Rod" 3272.3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line. 3571,3574 converted to Type 4. 3619,3620 converted to modified Type 4. Hi-speed cars equipped with 4-50 HP	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3349 3350-3424 3425-3449 3450-3499 3500-3549 3600-3624 3625-3654 3625-3654 3655-3699 3700-3749 3750-3799 3800-3801	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs St. Louis Osgood-Bradley CARS Kuhlman " St. Louis McGuire-Cum'qs " Dsgood-Bradley McGuire-Cum'qs St. Louis Cummings Kuhlman St. Louis	121 121 121 121 121 122 123 123 124 124 127 127 129 129	OB 25-96 "Brill 79El St.Louis OB 25-96 Brill 77Fl "Taylor "Cincinnati Taylor "St. Louis Stand.35Pl Brill 177 St. Louis Standard Timken 52	Walker 2-Steel D 2GE264 2WH508A " 2GE264 2WH508A " " GE265 " WH510 GE265 " WH510 GE265 WH510 GE265 WH510 GE265 WH510 GE265 GE265	K63BR n n n n K35=62 K35=HH n n K35A n	16,800 16,600 16,000 " 16,800 37,660 " 37,320 36,000 " 36,750 37,580 37,140	32 32 32 32 32 32 56 50 52 52 52 52 52 52 52 52 52 52	28† 0° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	813" 711" 813" 7110" 812" 815" " " " " " " " " "	10'8" 9'10" 10'10" 10'10" " " " " " " " " " "	2 2 2 2 2 2 2 3 4		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Org. 1000 series,11000 series in 1923 3200 series in 1923, 3223 to type 2 in 1922. 3248 converted to "Hot Rod" 3272.3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line. 3571,3574 converted to Type 4. 3619,3620 converted to modified Type 4. Hi-speed cars equipped with 4-50 HP motors and noiseless gears.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3349 3350-3424 3425-3449 3450-3499 3500-3549 3600-3624 3625-3654 3625-3654 3655-3699 3700-3749 3750-3799 3800-3801	DUR FOR DSR S Osgood-Bradley Brill McGuire-Cum'qs St. Louis Osgood-Bradley CARS Kuhlman " St. Louis McGuire-Cum'qs St. Louis Cagood-Bradley McGuire-Cum'qs St. Louis Cummings Kuhlman St. Louis	121 121 121 121 121 122 123 123 124 124 127 127 129 129	Brill 77El Brill 77El St.Louis OB 25-96 Brill 77El Taylor Cincinnati Taylor St. Louis Stand.35Pl Brill 177 St. Louis Standard Timken 52 Standard	Walker 2-Steel D 2GE264 2WH508A " 2GE264 2WH508A " " GE265 " WH510 GE265 " WH510 GE265 WH510 GE265 WH510 GE265 WH510 GE265 WH510 GE265 WH510 GE265 WH510 GE265	K63BR n n n n n n n K35–62 K35–HH n n GE-PCM	16,800 16,600 16,000 " 16,800 36,000 37,660 " 37,320 36,000 " 36,750 37,580 37,140 36,060 36,000 36,000 36,000 36,000	32 32 32 32 32 32 56 50 52 50 52 52 52 52 52 52 52 52	281 On n 281 On n 481]n 4815n n n n n n	813" 711" 813" 7110" 815" 11 11 11 11 11 11 11	10 '8" 10 '10" 10 '10" 10 '10" 10 '10" 10 '10" 10 '10"	2 2 2 2 2 2 2 3 4 4		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Org. 1000 series,11000 series in 1923 3200 series in 1923, 3223 to type 2 in 1922. 3248 converted to "Hot Rod" 3272.3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line. 3571,3574 converted to Type 4. 3619,3620 converted to modified Type 4. Hi-speed cars equipped with 4-50 HP motors and noiseless gears.	
7286 "TEDDY" CARS BUILT BIRNEY CAF 100-124 125-149 150-249 250-274 275-324 325-349 PETER WITT 3200-3249 3350-3349 3350-3349 3450-349 3500-3549 3600-3624 3625-3654 3625-3654 3625-3699 3700-3749 3800-3849	DUR FOR DSR S Osqood-Bradley " Brill McGuire-Cum'qs St. Louis Osqood-Bradley " CARS Kuhlman " St. Louis McGuire-Cum'qs " Osgood-Bradley " Csgood-Bradley " Cummings Kuhlman St. Louis Cummings Kuhlman St. Louis Perley-Thomas "	121 121 121 122 123 123 124 124 127 127 129 129 129	Brill 77El Brill 77El St.Louis OB 25-96 Brill 77El Taylor Cincinnati Taylor St. Louis Stand.35Pl Brill 177 St. Louis Standard Timken 52 Standard	Walker 2-Steel D 2GE264 2WH508A 3GE265	K63BR n n n n n K35-62 K35-HH n n K35A n K35A	16,800 16,600 16,000 " 16,800 36,000 37,660 " 37,320 36,000 " 36,750 37,580 37,140 36,060 36,000 36,000 36,000 36,000	32 32 32 32 32 32 56 50 52 52 52 52 52 52 52 52 52	9141 28100 0 0 28100 0 48110 48150 0 0 0 0 0 0 0 0 0 0 0 0 0	813" 711" 813" 7110" 812" 815" " " " " " " "	10'8" 9'10" 10'10" 10'10" " " " " " " " " " " " "	2 2 2 2 2 2 2 3 4 4 4		Single truck shop switcher Became DSR X76. 183, 205, 238, 240 converted to SE with double front doors. Some sold to Grand Rapids in 1924 Most of the cars in series 100-349 sold to other properties. Drg. 1000 series,11000 series in 1923 2200 series in 1923, 3223 to type 2 in 1922, 3248 converted to "Hot Rod" 3272,3277 converted to Type 4. 10 cars converted to one-man in '32 for Woodmere line. 3571,3574 converted to Type 4. 3619,3620 converted to modified Type 4. Hi-speed cars equipped with 4-50 HP	

CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF			REMARKS
PETER WITT	CARS, Cont'd.												
3851-3959	St. Louis	130	St. Louis	GE265 WH510	K35 KK	39,000	52	11	11	11	5		Hi-speed cars equipped with 4-50 HP
3960-3967	11	130	Timken 52			34,000	52	Ħ	11	11	5		motors and noiseless gears.
3968	00	130	St. Louis	WH1426	GE PCM	39,000	52	н	11	n	5		Traded numbers with 3850 in 1949
3969-3980	19	130	Timken 52		K35KK	34,000	52	п	11	11	5		Same as 3960-3967 group.
3531,3534	llowing Peter W ,3538.3543.3548	/itts 3.354	had rear d	oors ad	ded by I 574,3575	OSR: 327 5,3607,3	3 , 3	322,332 3665,37	3,3334,3 01,3702.	335,333	7,3340,3	346, 3711	
PCC CARS	Ct Iouis	145	Clark B2	WH1432		33,000	54	4616"	814"	10:0"	1		100 renumbered 141. 100,101 built with Pittsburgh Rys. 1500 series
100	St. Louis	145	n n	GE1220		11	54	11	11	11	1		100 (141),101 scrapped in 1956 at Woodward carhouse
102-140	11	147	St.LouisB3			36,000	50	46'5"	814"	1012"	2		
142-180	17	147	11	WH1432		11	50	11	11	н	2		150 scrapped, Nov.'54 due to accident.
181-233	н	149	Clark B2	WH1432		37,500	54	4915"	8'8"	11	3		
234-286	11	149	11	GE1220		Ħ	54	11	11	10	3		
EXPERIMENT	TAL CARS		Modified			I CO MEX	1	Olty In		1	1		0,000 plus \$100,000 for parts.
401 99-1,99-2	DSR	134	Standard 35 Cincinnati	WH508	K35	24,000	39	39!6"	8'6"	9'1"			"Blue Streak" car used on Woodmere. 3-car articulated train, originally
99-3	Cincinnati	124	Arch Bar	GE275	K35JJ	75,000	140	122'8"	8'2"	10'11"			5000-1-2 then 4000-1-2.
	ARS as of 1936	107	<u> </u>				г—		<u> </u>				
X1, X10 1848, 1906	DUR	108	Dupont	None	None								Single truck flat cars.
X3, X5 X6, X9	н	92	11	41	11		-						Single truck dirt cars. Double truck flat cars.
X17-X31	MCRR		Arch Bar	11	11								Purchased from Michigan Central R.R.
X33 X34,X35,X56	ACF	116	10	11	11								Double truck flat car.
X62,X68,X69 X71,X73,X74	DUR	105	Dupont	2GE203	K-35G		_						Single truck plows.
X36,X70,X72													X36 formerly DUR 517.
X75,X77	11	11	11	H	11								X36 formerly DUR 517. Single truck construction cars. Formerly 900 series passenger cars.
X37,X38	American	113	11	11	н		-						Single truck rail grinders. Single truck rail arinder.
X39	н	11	11	11	H								Rebuilt 1942 by DSR, formerly 939.
X41=X42	Differential	124		None	None	32,000	-	40161					Differential dump trailers.
X44-X52	"	125		"	Ħ	34,000		4010"					
X58-X59	DSR	129	Dupont										Single truck switchers.
X60,X65,X66	"	124					-						
X63	DI D			000000	14 050			0148	-				Line car
X76 X81	DUR	103	Dupont	2GE203	K=35G			914"					Switcher, ex DUR "TEDDY". Single truck air car, ex pass car.
X84,X85	Differential	125	Arch Bar	4WH93	K=35G	50,000	1	4010"					Differential dump cars.
X86	DSR	123	Taylor	4WR93 4GE210	11	50,000		40.0					Double truck plow.
X87,X88 X 96, X97	Differential	123	Arch Bar	4WH93	Ħ	45,000		40161					Differential dump cars.
X90	DUR	'11	N N	9	10	,000							Double truck crane.
X89,X91	11	107	Brill 27	H	19								Double truck plow.X89 by Russell 'O
X92	DSR	125		4GE203	et								Double truck supply car.
X93	11	129	ii w	11	H								n n n
X100-X113	McG.Cummings	124	McG. Cum.	2WH93 2GE203	K-35G	30,000		2813"	813"	11'0"		П	Single truck sweepers.
X200-X201	EM Ry.	129	Arch Bar	None	None	50,000		20 3	<u> </u>	110			Double truck flat cars. Formerly Eastern Michigan Railway.
X202	DSR	136	MCB	4GE210	K-35G								Double truck sand car.
X827-X828	Stephenson	101	Std. 0-50	4GE203	11								Money cars, ex pass cars same nos.
X829-X830	DUR	'19	en 11	(1	10								Money cars, ex pass cars 3112 & 3103
1057	St.Louis	103	19 19	None	None								Double truck spray car, ex passenge:
1209	Kuhlman	108	W 19	16	10								n n n n n n
1615	Niles	'11	99 33	4GE203	K=35G								Instruction car, ex passenger car.
1724	Cincinnati	107	11 11	11	10								Money car, ex passenger car.
1981	DUR	'14	Arch Bar	21	11								Double truck switcher,
7284	Niles	'16	11 11	н	91								Double truck line car.rblt to work.

DETROIT RIVER TUNNEL

Electric

Operated by the New York Central System (Formerly Michigan Central R. R.)

Locomotives

Data: JJB Compilation: JJB, LF

CAR NUMBER BUILDER			BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF		REMARKS		
						105000	451	00/ 0/0		43.10#		14'9"	R-1	Formerly 7500-7505	
160-165			Elec.		Alco	4GE209A		206,360		41'8"					
166-169	"	11		114	H	4GE209B		246,860		н		11	R-la	Formerly 7506-7509	
170-171	11	11	н	127	et .	11	11	249,300		4212"		11	R-1b	Formerly 7510-7511	
302 - 306 310	11	91	11	130 131	н	6GE286E	PCL	266,400		54 '0"		14 17"	R-2	Leased NYC engines Formerly 1204-1208, 1212.	
541	п	11	н	130	11	4GE286B		254,400		4710"		13'0"	DES-3	Leased New York Central engines. Combination 3rd rail, battery & diesel	
557,559	11	11	н	130	11	н	н	249,300		H.		11	11	11 11 11 11 11	
566	11	н	н	130	11	11	н	252,400		11		H	11	11 11 11 11	
	-														

ST. CLAIR TUNNEL

Electric

Operated by the Grand Trunk Western Railway Regular operation with electric motive power began on May 17, 1908.

Locomotives

Data: JJB Compilation: JJB, LF

CAR	BUILDER		TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF		REMARKS
150	Baldwin-Wes	108	3 axle	ick3WH137		128,900		29'10"	918"	13'0"	Z-2-a	Formerly 1309, 2660, 9150,
151-155	11 11	107	1	11		н		ŧi	11	18	Z=2-a	155 formerly 2655, 9155, 151-154 formerly 1308-5(reverse), 2659-6(reverse)
												9151-9154 respectively.
156	11 11	12	7 11 11	11		141,040		11	н	99	Z-2-b	Formerly 9156.
175-176	11 11	116	Baldwir	4WH151		143,000		39'0"	918"	13'0"	Z-3-a	Purchased 1934 from CSS&SB 505-506. Originally CLS&SB locomotives 6600 v.
707	English Ele	-										Line car, converted to diesel.
	111922011 220											All locomotives scrapped February '59

CLS&SB-Chicago Lake Shore & South Bend Ry. CSS&SB-Chicago South Shore & South Bend R.R.



DETROIT-WINDSOR:

The Michigan Central Railroad tunnels under the Detroit River between Detroit and Windsor were placed in operation under the name Detroit River Tunnel Company in October 1910.

About $4\frac{1}{2}$ miles of route, $28\frac{1}{2}$ miles of track, were electrified with underrunning third rail identical in construction with that used on the parent New York Central Railroad's New York-Harmon installation. Six locomotives were purchased originally; four more in 1914 and two in 1925. Others were later transferred from the New York area.

After the New York Central system committed itself to dieselization, the change of motive power at each end of the tunnel became something of a costly nuisance and delay. A powerful ventilating system was installed during 1953, capable of clearing diesel fumes easily from the 8368 ft. tunnels.

Electric operation here ceased on December 29, 1953. Several of the engines were sent to New York for further service, while the remainder were scrapped.



ST. CLAIR TUNNEL:

In 1901 the Grand Trunk Railway opened the international St. Clair Tunnel, replacing a slow ferry crossing of the St. Clair River between Port Huron, Michigan, and Sarnia, Ontario.

Deadly carbon-monoxide fumes from steam locomotives were a constant threat and, after a particularly disastrous accident it was decided to electrify the tunnel.

Electric operation began in February 1908. The single-phase 3300 v AC system was used, with overhead catenary trolley. Unusual threeaxle Westinghouse locomotives were used, supplemented in the late '20s by two four-axle units made surplus on the South Shore Line by its conversion to DC.

Electrification extended only 3.5 miles, of which 1.14 were within the tunnel. Load limit was 2000 tons.

Diesel locomotives took over all the work and the electrification was deactivated Sept. 28, 1958.



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"YPSI-ANN" and

DETROIT JACKSON & CHICAGO RY.

Michigan's interurban network had its beginning in a "steam dummy" line opened in 1890 between Ypsilanti and Ann Arbor. Hourly service and a ten-cent fare soon confounded skeptics by generating 600 riders per day contrasting with the 40 passengers carried on the Michigan Central Railroad, its steam competitor. Weekend riding was influenced favorably by the presence of the largely male University of Michigan at one end of the line and the all-girl Ypsilanti Normal School at the other.

In 1896 the line was electrified with immediate improvement in operation and receipts. On November 3, 1897 it was reincorporated as the Detroit Ypsilanti & Ann Arbor Railway. The main line was extended into Detroit and in 1898 a branch was opened from Wayne to Northville. The next year another branch was built, this one between Ypsilanti and Saline. By 1901, its name now changed to Detroit Ypsilanti Ann Arbor & Jackson Railway, the company had established thru service between Detroit and Jackson.

A promoter named Boland had meantime built the Plymouth & Northville Railway in 1898 and had purchased some right-of-way between Wayne and Detroit as the basis of a new interurban system. In 1901 he built the Detroit & Chicago Traction Company from Jackson to Grass Lake and Chelsea, with a branch to Wolf Lake. His crews met the construction gang of the Ypsi-Ann (as DYAA&J had become known) at Lima Center and the futility of further competition became apparent. By agreement his line was cut back to Grass Lake and eventually became part of the Michigan United System, while his lines nearer Detroit went into the Detroit United system.

Hawks and Angus, developers of the Ypsi-Ann, turned down a Detroit United offer of \$520,000 for their line, but in 1907, DUR took over anyway by assuming its bonded debt, and the name was now changed to Detroit Jackson & Chicago Railway. Operation was handled as a division of DUR, altho DUR never owned the road outright.

Thru service between Detroit and Kalamazoo over DJ&C and the connecting Michigan United lines began in 1911. A two hour interval was provided, generally using DUR's largest type of car. Altho DJ&C was a conventionally designed 600-volt interurban, with direct suspension overhead trolley, the cars used in this thru service had to be fitted with third-rail collectors for the Michigan United part of their trips. One daily trip also ran thru from Detroit to Lansing, using MUT rails north of Jackson. On alternate hours between the limiteds, DJ&C ran expresses between Detroit and Jackson, making local stops west of Ann Arbor. Other locals fattened the service east of Ann Arbor.

Decline set in on DJ&C in the mid-1920s and no extensive effort was made to improve the lines as DUR did on other divisions. The Saline branch was abandoned in 1925 and the Northville branch in 1928.

On August 5, 1927 a freight train developed trouble on the West Huron Street hill in Ann Arbor. The train was split into two portions to "double" the hill, and the first part was set out on a siding at the Fairgrounds. The motor then backed down to get the other cars, but in coupling the four cars, loaded with sheet metal, got away and rolled down the hill out of control. They failed to make the curve at Main Street and demolished the Farmers & Merchants Bank, doing \$50,000 damage, to be added to the losses now accruing to the operation of the railway.

When DUR was reorganized in 1928, DJ&C was left out, coming instead under the operating control of Michigan Electric (Michigan United's successor), effective April 11th. But the end was not far off, and interurban operation was abandoned on September 30, 1929. For a few years, Detroit Street Railway operated street cars over former DJ&C tracks as far west as Dearborn.

DETROIT & NORTHWESTERN

One of the smaller interurban properties taken into the DUR was the old Detroit & Northwestern. This began as the Grand River Electric Railway, building out Grand River Avenue in 1897, thru Greenfield, Livonia and Farmington to Northville. The Pontiac and Sylvan Lake, begun in 1895, built south from Pontiac to meet the other line at Farmington and the two properties were combined in 1899 to form the D&NW. Thru service was run between Detroit and Northville, with a connecting car operating between Farmington and Pontiac.

DUR acquired the road in 1901 and followed the same pattern of operation, with hourly thru service plus a half-hourly daytime supplementary service as far out as Grand Lawn Cemetery, 14 miles from Detroit.

DETROIT & PONTIAC:

Built in 1897 as the Oakland Railway, the line connecting Detroit and Pontiac was laid for a large part of the way on the sides of Woodward Avenue. Entirely double track, the line operated frequent service.

Its first cars, built by Kuhlman, had open rear platforms, aisles along the right side and side doors.

Shortly after opening, the line was renamed the Detroit & Pontiac Railway. DUR acquired it in 1901.

DETROIT-WYANDOTTE:

The first street railway service to Wyandotte was opened by the Wyandotte & Detroit River Railway in 1892. The original run was for $1\frac{1}{2}$ miles west from the River Rouge and used a bobtailed single-truck car actually operated by the Detroit Edison System. The 17-mile line to Trenton was completed in 1893. It left Detroit via Fort and Clark Streets, then on Jefferson thru Springwells. It ran on city streets almost the entire distance. It became part of the Detroit United Railway system in 1901 and was used as part of the original route to Toledo.

After the parallelling interurban route of the Detroit Monroe & Toledo Short Line was opened in 1905, the Wyandotte-Trenton line became a suburban route. It had frequent service and its cars looped thru downtown streets instead of using the interurban terminal. Running time for the 17-mile run was 85 minutes.

DETROIT-FLINT-IMLAY CITY:

The Detroit Rochester Romeo & Lake Orion Railway opened a 37-mile line from Detroit to Romeo in the spring of 1900. The line began from a connection with the Pontiac line at Royal Oak and shared the former's route into town over Woodward Avenue.

A branch from Rochester thru Lake Orion to Oxford was opened in 1901, using the side door cars by then displaced from the Pontiac line.

DUR took over in 1901, and thru a dummy subsidiary, the Detroit Lake Orion & Flint Railway, extended to Flint in 1902. Thru another subsidiary, the Detroit Almont & Northern Railway, DUR made the final 17-mile extension from Romeo to Imlay City in 1915.

DUR service on this line is detailed elsewhere.

RAPID RAILWAY SYSTEM:

Begun in 1895, the Rapid Railway, planned to link Detroit with Port Huron, was the first Michigan interurban to break thru the prevailing low speed ceiling of street railway practice. The first part of the line was opened in 1895 between Detroit and Mt. Clemens, via Gratiot Avenue.

Track was laid with 60-lb. rail on a well-ballasted right-of-way. The line entered Mt. Clemens via a 3-span truss bridge over the Clinton River. Its first cars, built by Jackson & Sharp at Wilmington, Delaware, resembled more the steam road coach of the day than the elongated street cars used on other lines.

In 1898 a longer "Shore Line" route was opened from Detroit via East Jefferson Avenue thru Grosse Pointe and along Lake St. Clair. Both routes had service at 30-minute intervals thruout most of the day. When development of AC power for transmission with rotary convertor substations eliminated restriction on distance in 1899, the 45-mile extension on to Port Huron was begun. Trackage of a steam dummy line from Mt. Clemens to Algonac was absorbed into the new line,

and from there the route closely followed the St. Clair River. Twelve 55 ft. cars were purchased and regular service began in the summer of 1900.

Street Railway Journal called Rapid Railway "one of the earliest, if not THE pioneer high speed electric interurban railway in the country."

In 1901 the Detroit United Railway acquired control of the Rapid Railway System. Limited service was inaugurated in 1906. A number of DUR's heavy Niles cars supplemented the original equipment after 1912. Seven daily limiteds made use of a cutoff that had been built between Anchorville and Marine City which shortened the distance by some 8 miles. Running time for limiteds was 2:35, with hourly locals making it in 3:25.

DUR made the most of the Rapid lines during the heyday of the trolley, but by the late '20s, these were as badly off for traffic as the other parts of the system. The Shore Line route had to be abandoned in 1927 except for a short stretch in Grosse Pointe, taken over for a time by DSR. The Short Line route was abandoned in January 1930. Detroit Street Railway operated cars as far as Mt. Clemens for a year and then gave it up as a losing proposition. A section of the line between Algonac and Marine City was purchased by the Chris-craft boat building firm for use as a freight line, operated by gasoline locomotive. By 1957, when most Chris-craft boats were too large to travel by rail, it too was abandoned.

DETROIT MONROE & TOLEDO:

Toledo & Monroe Railway opened a 21-mile line from Toledo to Monroe in 1901. City trackage was used out of Toledo and thru Monroe. A generating station in the latter supplied power thru a 15 kv transmission line. Rolling stock included ten small interurbans.

In 1904 the company came under control of the Everett-Moore syndicate and was reorganized as the Detroit Monroe & Toledo Short Line. Everett-Moore had started work on an independent route, but sold the never-used trackage to the Grand Trunk and Nickel Plate steam railroads after acquiring DM&T. A 36-mile extension into Detroit was completed in 1904.

There was no grade greater than one percent and all the rural curves could be taken at full speed. North of Trenton, the route closely paralleled the DUR Trenton suburban line, but unlike the latter was mostly on private right-of-way. It entered Detroit via West Fort Street.

The line was well graded with 70 lb. rail and rock ballast taken from the company's own quarries. About half the road was double track by 1906. All grade crossings with other railways were avoided.

For the initial thru service, twelve Stephenson built cars designed for high speed operation were acquired. Running time originally 2:50 was cut to 2:05 for limiteds running about every two hours, and 2:25 for locals. With the acquisition of the Niles and Jewett limited cars in 1911 and

later, thru service between Detroit and Cleveland in conjunction with the Lake Shore Electric Railway east of Toledo was inaugurated. It was not uncommon to see multiple unit trains with cars of both companies coupled.

One of the most serious accidents in DUR history occurred on September 11, 1926 when 10 were killed and 30 injured in a head-on collision south of Monroe in single track.

In 1928 the line was reorganized in the breakup of the Detroit United, becoming the Eastern Michigan-Toledo Railway, but continuing under Eastern Michigan Railway management.

A new thru run in conjunction with the Cincinnati & Lake Erie between Detroit and Cincinnati was begun in June, 1930. C&LE cars, including its famous high speeds, were used. One run made a late departure and an all-night trip. With the coincident decline in local traffic, it took only a very few Eastern Michigan cars to run the line, with six Cleveland trips using LSE cars, three Cincinnati trips with C&LE cars and only two additional Toledo-Detroit trips.

However, faced with various costly renewals, the constantly lowering traffic level brought about abandonment on October 4, 1932.

DETROIT UNITED RAILWAY Interurbans:

After the Everett Moore syndicate acquired control of the city railway system in Detroit in 1901, they moved into the interurban field as part of their scheme to control all lines of electric railway in Ohio and Michigan. Within a year they acquired the Wyandotte line, the Detroit & Northwestern Railway, the Flint line, the Pontiac line, the Rapid Railway System and the lines across the river in Canada. The lines were put in good condition, some for high speed operation, and patronage began to build up.

The Toledo-Detroit line was taken over in 1904, and after 1907 the Detroit Jackson & Chicago Railway was operated as an integral part of the system, altho not actually owned.

Since the interurbans used city track to enter Detroit, were owned by the same corporation and managed from the same office at 12 Woodward Avenue, it came to pass that the interurbans were made to suffer for all the real and imagined past sins of the city lines. In their campaigns, Detroit politicians made a whipping boy of the traction system and much of their hate spilled over onto the interurbans.

A look at the record, tho, shows that interurbans provided good service, with intervals of one hour or less bringing Detroiters out of town for holidays and visitors into town for work, office or to be customers for Detroit merchants. The car fleet was expanded and improved to the limit of DUR's financial ability.

DUR was also agressive in building up freight and express business. In addition to the original box motors taken over from predecessor lines, the fleet was expanded by new purchases and some home construction. DUR early joined the Central Electric Railway Association and participated in interchange freight service and thru rates with other electric railways to points in Ohio, Indiana, Illinois and Kentucky. A feature service was the "Aeroplane", a thru overnight time freight to Indianapolis. Specialized freight equipment included such things as a glass-lined bulk milk tank car, which ran between points on the Rapid division to a dairy on Oakland Avenue, Detroit.

In 1914, Detroit United began hauling automobile bodies from a plant on the outskirts of Detroit to the Buick factory in Flint. Flat cars with special racks were used in this service. While this business, taken away from the steam railroads, proved lucrative, DUR actually was, with each load, driving another nail in its coffin.

An order of the United States Supreme Court was needed in 1915 to compel the Michigan Central Railroad to interchange carload freight with DUR at Oxford, and a 50-ton Baldwin-Westinghouse locomotive was acquired for this service.

In 1917, one B. F. Stephenson was developing real estate in and around Royal Oak. He built, under a steam road franchise, the Highland Park & Royal Oak Railway. Cverhead was supported by impressive concrete-imbedded steel truss bridges. DUR made plans to use this route as the main line for its Flint interurbans, bringing them out from downtown via Oakland to avoid being caught behind city cars on Woodward, the regular route. These plans never materialized, but service on the Stephenson line began with a local car running between Woodward & McNichols and Eight-Mile & Stephenson. It was extended north into Royal Oak in 1921, but in 1928 it was cut back to the original terminal.

DUR got into financial difficulty in 1920-1921. It was proposed to cut wages and, for once, the City of Detroit did not object as the city expected to own the city lines soon so the savings would be theirs. The cut, along with money realized from sale of the Canadian properties to Ontario communities and from the sale of 30 miles of city lines in Detroit to the new Detroit Street Railway, brought in enough money to see the interurbans thru this particular crisis.

The Detroit Street Railway had been building rail lines, partly in competition with DUR within Detroit, and in 1922 it gave DUR notice to vacate Woodward Avenue and Fort Street, which it intended to occupy with its own tracks. Realizing that soon the interurbans might be left with no entry into town, DUR arranged the city sale contingent on retaining access rights to downtown for the interurbans.

Parlor cars were put on the Pontiac run in 1923 and on the Flint limiteds in 1924 in a spectacular effort to attract business. A small extra charge was made for the use of individual parlor car chairs in these trains. The cars were

rebuilt from various types of trailers, equipped with motors and controls. A similar service was tried on the Toledo line.

Bus and automobile competition began to cut interurban traffic at the same time that traffic congestion on the streets of Detroit began to slow down the cars seriously. In 1924, the Flint, Toledo and Port Huron lines were cut back to edge-of-town terminals at Highland Park, River Rouge and Roseville, respectively, with special connecting bus service to downtown. The saving in time and equipment was offset by the inconvenience of transferring (not required on competing motor bus interurbans) and thru rail service was resumed after only a few months.

In 1925 DUR was placed in receivership, brought on, of all things, by a bus manufacturer. Reorganization thru assessment on the stockholders failed for lack of subscription. Fares were raised to 3¢ per mile and the receiver began to abandon unprofitable branches. The Saline-Ypsilanti and Farmington-Northville sections were abandoned in 1925. In 1927, the Wyandotte division was discontinued as well as the Romeo-Imlay City line, which had only been completed in 1915.

That year also saw the end of the Farmington-Orchard Lake service and the disposition of much surplus property, such as powerhouses not needed as the result of purchase of power.

Threatened by bus competition, DUR put new lightweight one man Kuhlman cars on the Pontiac run in 1926, with a 15-minute headway schedule. The "Royal Blue" cars, bearing the names of Indian chieftains, were put into limited service and the older cars, working local service, were given new paint jobs. Traffic did hold up for a time.

In 1928 the Plymouth-Northville line of DJ&C was abandoned, but the most significant event of that year was the liquidation of Detroit United Railway. A new company, Eastern Michigan Railways, was formed to take over remaining operations. This included the interurbans except the Detroit Jackson & Chicago line and the Detroit Monroe & Toledo line. The former became independent, while the latter became Eastern Michigan-Toledo Railroad but was operated by Eastern Michigan Railways management. The city lines in Pontiac, Flint and Port Huron were also taken over by EMR, while an agreement was reached permitting Detroit Street Railway to operate over certain tracks formerly used by interurbans only. DSR was accordingly soon running cars out to Farmington and to Wyandotte. When EMR abandoned the Port Huron line in 1930, DSR starting running to Mt. Clemens. However, none of the DSR extensions proved profitable and all were given up after a year or two, with a sole exception.

That was the Royal Oak line, out on Woodward, which DSR began when the EMR Flint and Pontiac lines were abandoned in April, 1931. The city of Royal Oak seized the poles, wire and

track of this line for a tax lien, and offered them to DSR to bring their cars into town. This portion of operation remained until 1947.

The last interurban ran out of Detroit on the Toledo line in October 1932. Only the Stephenson highway line was then left. Built under steam railroad laws, Royal Oak couldn't touch this when they seized the portion of the Flint route. EMR had a profitable milk run from a depot in Royal Oak to a dairy on Six Mile Road east of Oakland. However, to hold the franchise, the state required passenger service, so a single car ran back and forth over the line a few times a day. There were times it didn't even have a fare box aboard. The ghost run continued until May 31, 1934. The last line built for DUR was also the last to operate. SANDWICH WINDSOR & AMHERSTBURG:

A horse car line opened in 1874 between Windsor and Sandwich, Ontario. On May 24, 1886, the first electric street car in Canada was operated over a line between Windsor and Walkerville. The owner died shortly thereafter and electric operation was given up in favor of horses. The two lines came under common control and were permanently electrified in 1891. Extensions were made to cope with the city's growth and to reach the station of the new international tunnel line of the Michigan Central Railroad.

In 1901 the Detroit United Railway bought the Sandwich Windsor & Amherstburg Railway, as it was now known, and continued its expansion. In 1903 the 14-mile extension to Amherstburg was opened. The Windsor & Tecumseh Railway commenced to build to the latter city in 1907. It was taken over by SW&A and completed in the same year. Beyond Walkerville, the line followed a country road in what was really a suburban operation.

The life of SW&A was not a happy one. It was constantly engaged in a wrangle with the municipalities over paving, extensions, franchises and service. Just as in Detroit, municipal ownership was discussed for a decade. As a result of the uncertain future, DUR allowed the property to deteriorate. When the franchise expired, the municipalities purchased the system for \$2,039,000 and took possession March 31, 1920.

A contract was made with Ontario Hydro Electric Commission to operate the property. Some rehabilitation took place and new, lighter cars were obtained.

The depression of the 1930s struck the Windsor area severely and operating losses resulted on the traction line. Hydro Electric cancelled its contract for operation.

The towns began direct operation, appointing a new chairman in 1937, who, after investigation, recommended bus substitution. The interurban rail lines to Amherstburg and Tecumseh were abandoned in 1938. The city lines were converted to bus in steps, beginning in 1938 and ending on May 7, 1939.

ANN ARBOR TRACTION

On September 28, 1890 "Ann Arbor City Lines" began running the first car line in Ann Arbor. The original route was from Wells Street and Lincoln Avenue down Lincoln to Hill Street, west to East University, thence to Monroe Street; Monroe to State to East Williams to Main to Catherine to Detroit to the Michigan Central Railroad Depot.

Some track was abandoned the first winter that the line operated, but not for lack of patronage. It was found that the cars couldn't climb the hill to Detroit Street from the Depot, so it was decided to tear up about 50 yards of track and end the line on Detroit Street near the Broadway bridge.

The return route was similar: changing ends, the car made its way back to the corner of South State and East Williams. Here it turned left, then took a jog right onto North University to Washtenaw Avenue where it proceeded to the curve just before the Hill Street intersection, down Hill to Lincoln and back to the barns.

The line needed six cars for regular service, and owned ten until a disastrous car barn fire in 1894 demolished all but one car. Operation was suspended until the next year.

In 1895 the property was acquired by the Ypsilanti & Ann Arbor Railway, then projecting an interurban railway to Detroit.

In 1902, when the "Ypsi-Ann" interurban pushed thru town on its way to Jackson, another city route was established. This one extended from the car barns down Wells to Packard to South Main to Huron to Jackson as far as the Fairgrounds.

The line was never a money maker and according to the records of the interurban operation it was a continual drain. In 1913, as part of an economy drive of the Detroit Jackson & Chicago Railway, conductors were laid off and the city cars ran with one-man crews. The city lines became a DUR operation when the Detroit United absorbed the DJ&C interurban line.

While the cars which operated in Ann Arbor weren't necessarily any more quaint than those of many another small city in the United States, Ann Arbor is a college town (University of Michigan), so the school's alumni have handed down a fine legacy of anecdotes of the Ann Arbor "toonervilles" and the men who ran them. Motormen were town characters, known by everyone who rode their cars. One such was Jim Love, who took pride in calling off the name of every fraternity, sorority and private home along Washtenaw Avenue.

Students also caused the company no end of trouble with their pranks—bouncing cars off the track, greasing rails on the hills and the usual trolley pulling. It was also the students, or the size of the student population, that unwittingly caused the early end of service in the town. Usually attending school on very limited budgets, these students rode bicycles or walked when they had to go somewhere, and it was lack of this patronage that caused the line to lose money consistently in a town whose population normally should have been able to support a street railway.

On January 2, 1925 the system suffered its second bad car barn fire. Had it not been for the fast work of the mechanical foreman, the cars would have suffered destruction as the barn did. He hurriedly ran the cars out into Lincoln Avenue. But the blow to the company's finances was more than it could bear, and on January 31, 1925 the last street car run was made in Ann Arbor.

MT. CLEMENS:

Ahorse car on Cass Avenue was the start of transit service in Mt. Clemens in 1890. It connected the Grand Trunk Railway depot with the hotels and bath houses at this watering spot. The Mt. Clemens & Lakeside Traction Company got its franchise in 1895 and extended the route. The line was acquired by Rapid Railway in 1896 but was not electrified for local service until 1900. Detroit United operated the Mt. Clemens service in connection with its Detroit-Port Huron interurban thru the years.

In 1927, the condition of the DUR required elimination of all marginal operations, so moves were initiated to abandon the Mt. Clemens city line. In June of that year they got permission from the city council to take off the cars despite a franchise clause requiring that a change in service should be approved by 3/5 of the voters in an election. Altho the courts upheld the company, it yielded to a petition and operation was resumed, only to lose \$10,000 in 1928.

In March 1929 the company, still meeting the franchise requirements, cut weekday service from 36 to 6 trips and eliminated Sunday operations. The dinkey did not cease completely until January, 1930, when the Eastern Michigan Railways abandoned its interurban line thru town. For another year a sort of local service was given by Detroit's Department of Street Railways.

PORT HURON:

Local transitin Port Huron began with a stage coach line operated by William Pitt Edison, half brother of Thomas A. In the early 1860s Edison laid rail and replaced the coaches with horse cars. By the 1880s the line consisted of 2 miles of "the most miserable piece of track that could be imagined", 40 horses and four cars.

In 1886, H. L. Talbot, a local capitalist, started to convert the line to electric operation, using the Van Depoele system. The trackhad to be entirely rebuilt in addition to the electrical work. The Van Depoele "troller" simply refused to stay on the wire. Each time it came crashing down, it knocked a hole in the roof of the car and damaged itself so that expensive repairs were necessary. The more conventional trolley wheel on a pole was substituted before regular service began.

The Port Huron system was the first electric line to negotiate a swing bridge. It was some time before a successful method was devised to make and break connections automatically when the bridge was swung. A submarine cable was run across the river to assure continuous flow of electricity.

In 1892, the Port Huron Electric Railway was taken over by the City Electric Railway. A new line was built to the Grand Trunk Railway depot when that company's new tunnel under the St. Clair River was opened.

In 1901 the system was acquired by Detroit United Railway and continued as part of this or-

ganization thru the years.

After World War I, the company found it uneconomic to operate 24-seat cars with two man crews for a nickel fare. The city opposed oneman operation on safety grounds, but on August 4, 1924, the railway sent one-man cars out on some runs. The chief of police parked his auto across the car tracks to halt operations and the company shut down the system: The city gave permits to a heterogeneous collection of rubber tired miscellany, all charging 10¢ with no transfers. Mindful of the Saginaw situation, in which the street car company went out of business under similar circumstances, the parties soon came to terms. After four days car service was restored, half with one-man and half with twoman cars. The people voted for 5¢ fare and oneman cars in preference to 7¢ fare and two-man

However, it needed more than this to bring life into the failing street car system, and on January 28, 1930 service on Michigan's first electric railway was ended.

PONTIAC:

The city car lines in Pontiac were a development from the interurbans entering the city. The Detroit & Pontiac Railway got its rails along Saginaw and Oakland Streets in 1900. The Detroit & Northwestern came along shortly, but D&P refused to let D&NW cars use its tracks, so D&NW laid a third track in Saginaw Street and a second track on Oakland and on a loop route past the railroad depot and the State Hospital. This loop offered the first city service in Pontiac. Both the interurban companies were taken into the Detroit United System in 1901, ending the costly rivalry.

Pontiac's rapid industrial expansion required the construction of new routes. First the "Loop" route was extended, then, in 1920 the Huron line was added. In 1921, the Edison and Sanford lines were built. A further extension to the Sanford route, made in 1927, reached the GMC truck plant. As these routes were added the original loop line was revised several times.

The third track on Saginaw Street was a bone of contention between the city and the railway. In 1927 the city wanted to repave the street and agreed to split the cost with DUR if the traction company would replace this stretch with modern two-track construction.

Pontiac had received a variety of cast-off Detroit city cars in early years. In 1927 DUR pur-

chased 10 deluxe cars of advanced design for it. Together with track relaying, double-tracking and new maintenance buildings this program cost DUR over \$1 million.

However, with the demise of the Detroit interurbans in 1931 the Pontiac system was left isolated from the main shops in Highland Park and the company decided to undertake bus conversion of the local lines. With the final runs of the State Street line in 1932, the "10 little Indians" were shipped to Flint.

FLINT:

City railway service in Flint began in 1900 when the interurban railway reached there from Detroit. During its first months service was provided by steam locomotives pulling trailers lettered "North Park Street Railway".

To provide sorely needed service to the Buick plant, an extension of the interurban route was made in 1904. This was operated just for local service and was the beginning of a local electric car system.

In 1908 the Saginaw & Flint Railway entered town from the north along Saginaw Street and overlapping for one block between Witherbee and Hamilton with what was now the Detroit United Railway. A violent contest arose for control of the short stretch of street. Actually more was involved; it became a question of who would build the city system in Flint, DUR or the Michigan Railway, parent of the Saginaw-Flint line. In time DUR won out by granting Michigan Railway trackage rights for its interurbans and by making certain concessions to help develop thru interurban business.

Extensions to the Flint city system came rapidly up until 1920. In 1925, when DUR went into receivership, Flint had 37.5 miles of track in operation and used 88 cars for the service. The same problem of interdependence of the city and interurban systems on sharing the costs of trackage raised the question of dropping the service. The city objected to a proposed fare increase; DUR offered to sell the lines to the city; having seen Detroit's example, Flint wanted nothing of municipal ownership. A Federal Court finally ordered the fare up to 7¢ by July 30, 1925. After more struggling thru the late 1920s and early 1930s the fare went up to 10¢.

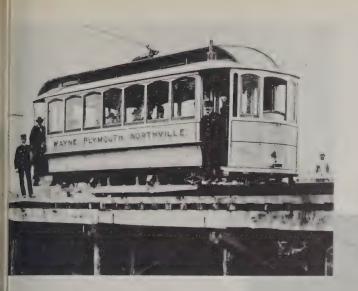
In 1932, ten modern cars came to Flint, practically new, from Pontiac. But they coulnd't lift the property from its doldrums and service was changed to bus on April 4, 1936. The new cars were sold to Oklahoma City.

DETROIT ITSELF:

Of course, D.U.R.'s most important property was the urban system in Detroit. For the Detroit story, please refer to Section I of this bulletin.



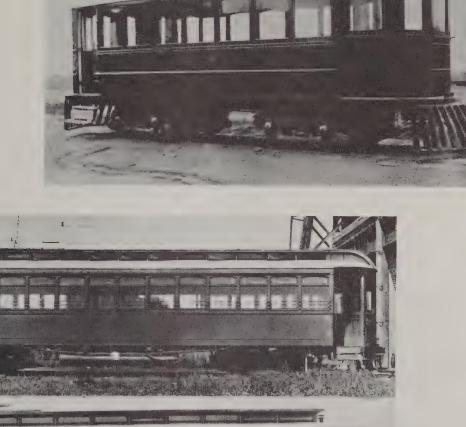




BH

Among the cars provided by Detroit Jackson & Chicago Ry.'s predecessors were the small cars shown at the top of this page.

They were used between Wayne, Plymouth and Northville.

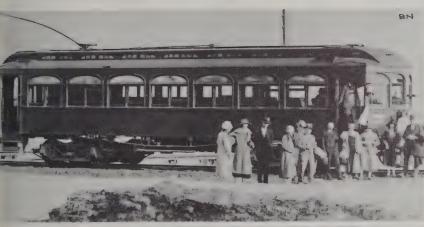


Above are the Detroit & Northwestern's car types. Topmost is #14, a Kuhlman job for the thru service between Detroit and Northville via direct route. Below it is #18 for the tripper runs out as far as Grand Lawn cemetery. D&NW also built the line between Pontiac and Farmington.













Upon completion of its line thru between Toledo and Detroit, Detroit Monroe & Toledo Short Line acquired this group of cars from the John Stephenson Car Company. Originally planned to be capable of 100 mph, they ac-tually achieved much more modest and typical 50 mph speeds. After Detroit United management moved in, the standard open rear vestibule was applied to some of these cars, giving them and observation car appearance. Their

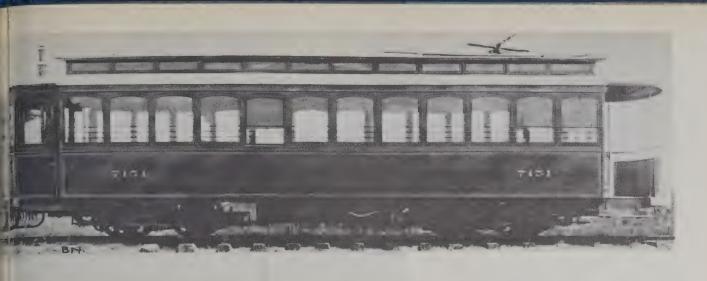
numbers were also changed by adding the prefix 7 to the old 500 series number. Their mechanical equipment included L4 controllers and storage air brake system. Notice the weedsie appearance of the right-of-way, especially in the scene at Dubois Siding at the left.







Standard (as nearly as one could identify a standard) of the first decade of the Detroit United was a single-end 50-foot car with open rear platform, with drop platforms at both ends and with storage air brake system fed by fixed compressors at a few key stations along the route. By the end of the second decade, these characteristics had largely disappeared (see pix, lower left).

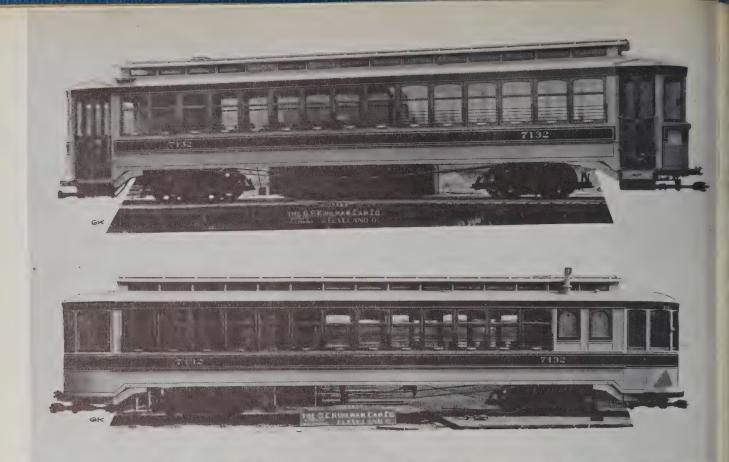




Perhaps D.U.R.'s most modest type of interurban car was this small, plain unit used on the Wyandotte-Trenton-Detroit service.

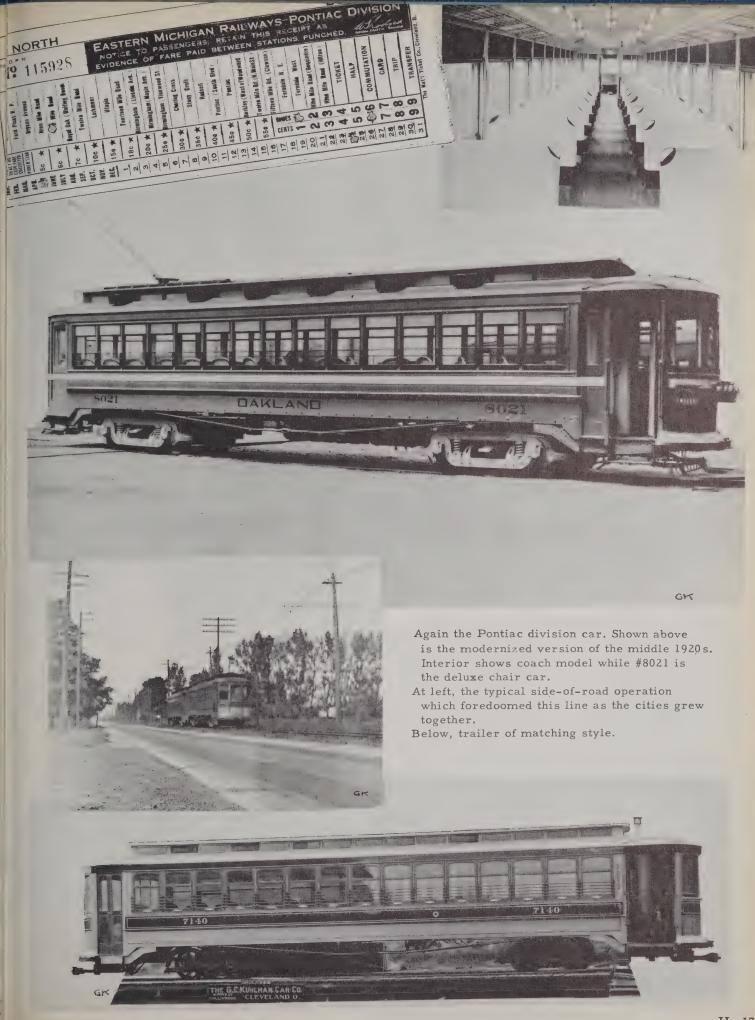
Again, as originally built, this was a single-end, open rear platform body. D.U.R. closed the rear platform and double-ended the car, but otherwise spent a minimum on this branch. The storage air brake system was also used on these cars.



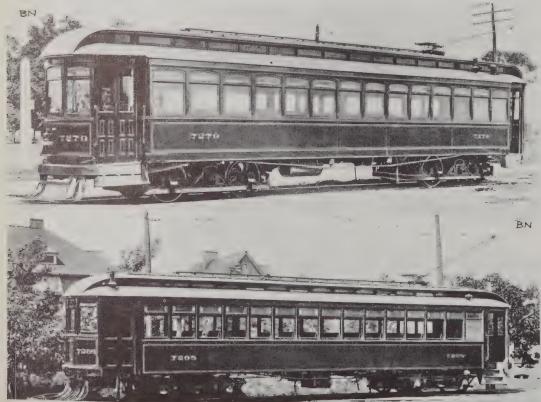




This is the long, suburban style car that characterized only the Pontiac Line of the D.U.R. system.
Builders' views at top show bodies on shop trucks.







Building from the railway company's specifications, a number of car builders came up with interesting variations on D.U.R.'s basic first decade design. A few of these cars, like #7302 at top, had Westinghouse MU control for operation in two-car trains.

A number of early Detroit Jackson & Chicago Railway cars were rebuilt and lengthened to increase seating capacity. The Barney & Smith-built cars shown here were so reworked.

Subsequent rebuilding by Detroit United converted some into double-end trailers as shown below.



Right: 7777.

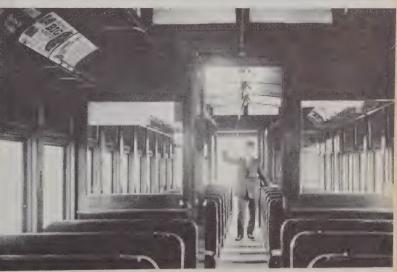


Left: Trailer #7768 carrying Eastern Michigan Railway lettering.

II - 19

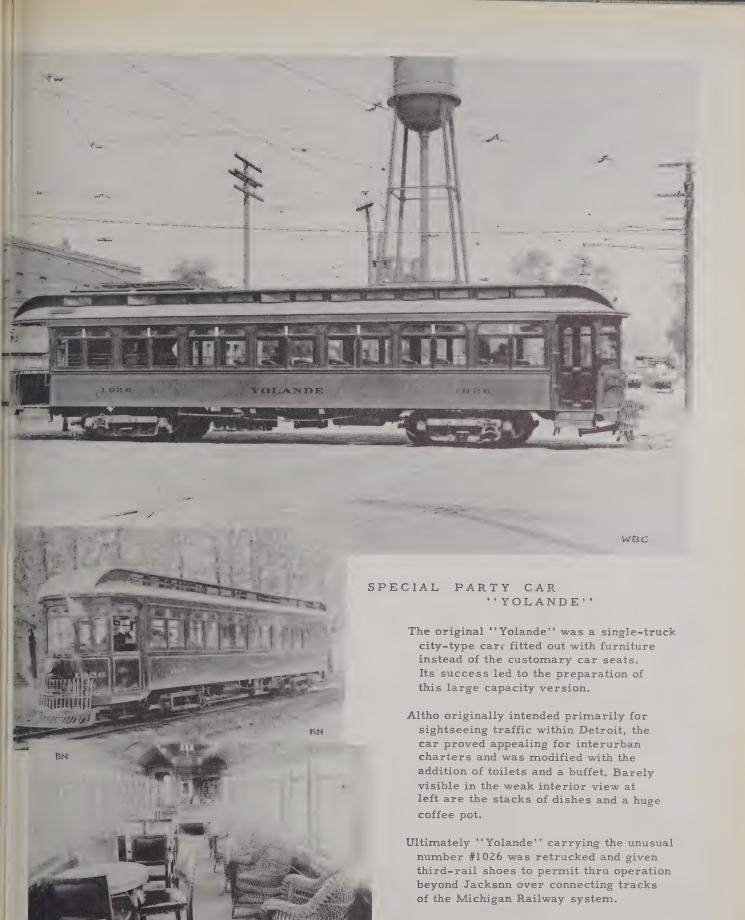


Left: Trailer #7767.



Right: Interior #7777.



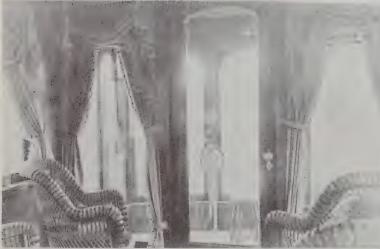




Rebuilt from one of the
Stephenson-built cars of
Detroit Monroe & Toledo Short
Line, #7500 was a stylish
parlor car suitable for V.I.P.
and charter work.

Both ends were modified for observation purposes, fhe forward end with deep solarium windows; the rear end with brass-railed open platform.

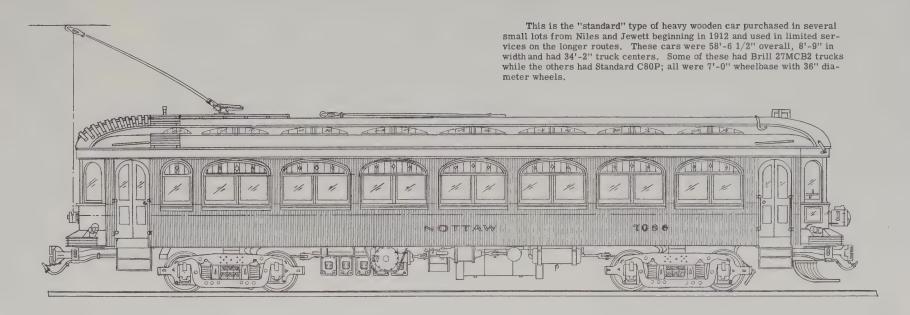






The "coffee-grinder" L-4
controller of the original
DM&TSL car gave way
to the compact "elevator"
style AL equipment and a
compressor replaced the
old storage system.







DETROIT

UNITED

LINES

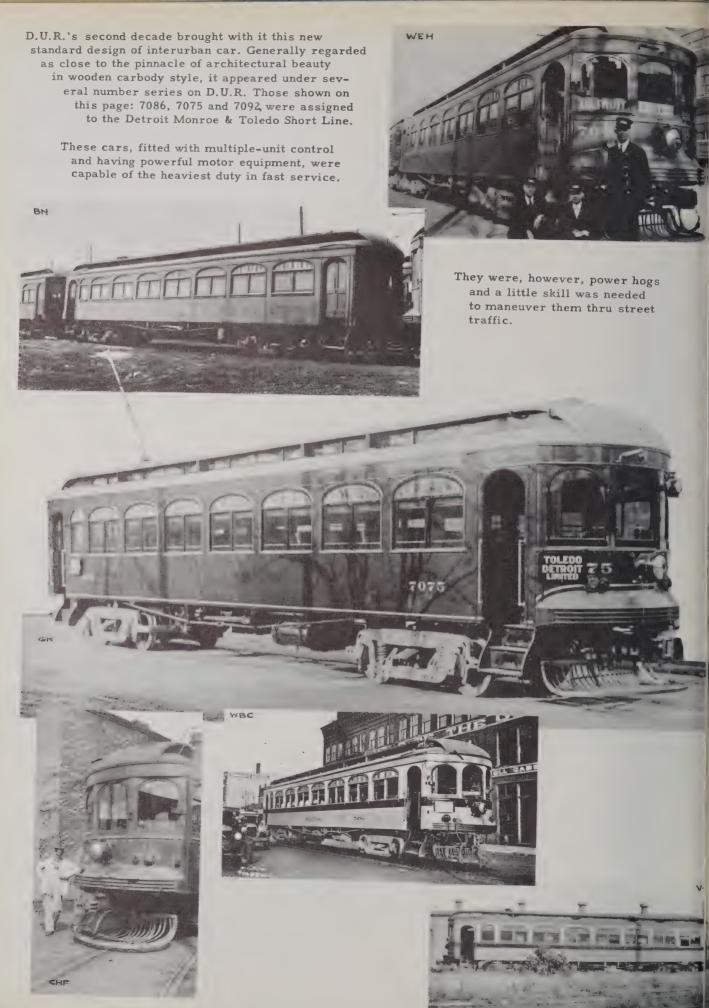
Electrical equipment was furnished by both General Electric and Westinghouse, with 4-110 hp 600 v DC motors geared for a speed of 55-60 mph. Control was GE-type M automatic accelerating or Westinghouse AL with a C36 master controller at the front end only.

Braking equipment was Westinghouse AMM with a D2 compressor.

The design was carefully developed to permit interchange with connecting properties and certain cars were equipped with 3rd rail shoes for thru operation over the Michigan United lines west and north of Jackson as well as north of Flint, Other cars were used in thru service to Cleveland via the Lake Shore Electric Railway. When used over Michigan United, the DUR car could not be multipled with a MUT car, but the control was compatible with that used on Lake Shore Electric and it was common to see cars of the two companies coupled in trains.

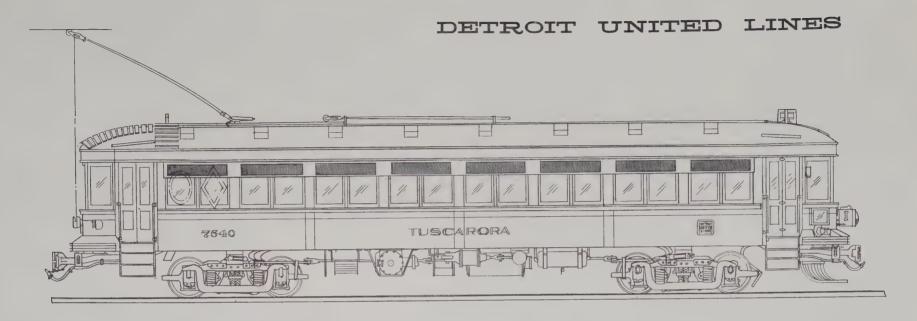
Some minor variations existed in these cars, especially after years of service produced gradual changes. Most evident was the elimination of the bevel-apron above the bumpers and the repositioning of the jumper receptacles. See the various photos elsewhere.

Drawing from City of Detroit, Dept. of St. Rys. data, by GK.

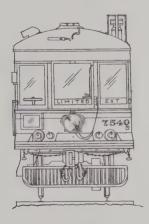








58'-3 1/2"



Length over vestibules 56'-5 1/2" Length between truck centers 34'-2 1/2" Length of vestibule bulkhead to dasher 5'-5 1/2" 8'-2 1/2" Width over posts 30" Width of windows, post to post 12'-9" Height from track to roof 18 1/8" Height from rail to 1st step Height from 1st to 2nd step 11 1/2" Height from 2nd to 3rd step 11 1/2" Height from 3rd step to carfloor 11 1/2" Width of seat 36" Width of aisle 20" Seating capacity 54 (Trlr, 70)

Length over bumpers

Air Brakes: AMM with D3F compressor 36" diameter rolled steel Weight: Motor, 83,660; trail, 57,000 lb. Interior finish: Cheery Minimum curve radius: 35'-0"

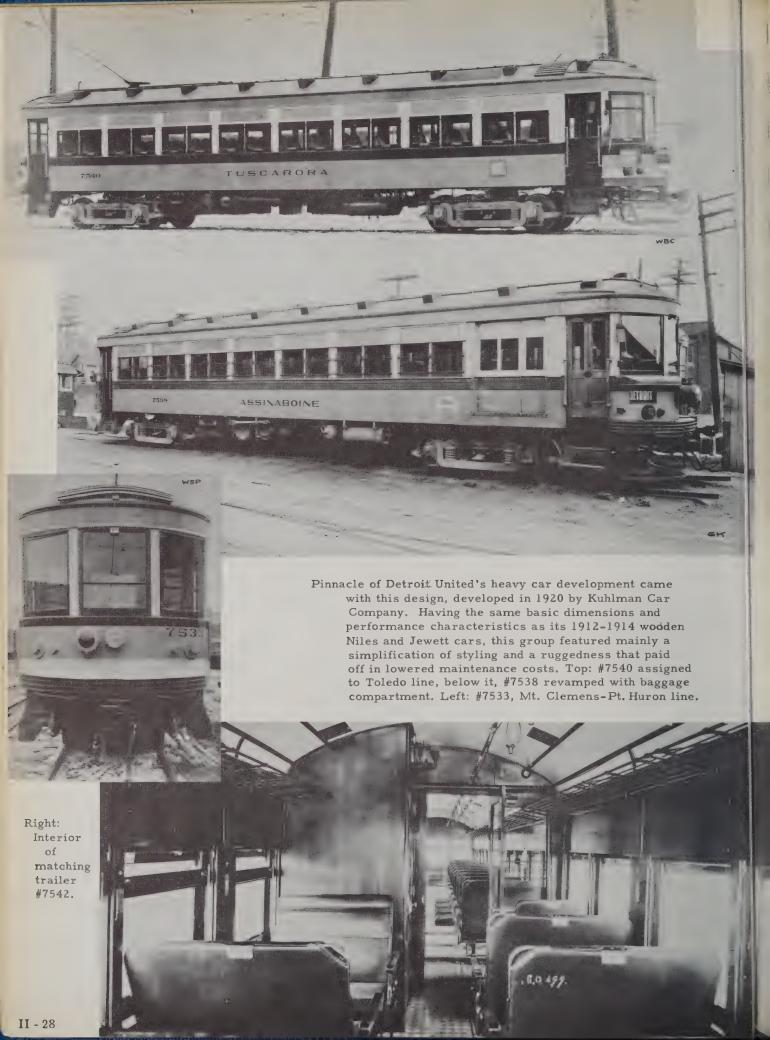
G. C. Kuhlman Car Co., Builder Cleveland, Order 698-699 Number of cars built: 10 motor and 6 trail Date of completion 1920 Trucks: Brill 27MCB3x 7'-0" wb Motors: 4-Westinghouse 557A8 140 hp. each at 600 volts DC Rating: Westinghouse ALF C36

Control:

Color scheme, Scarlet body, black trim, later,
Dark grey body with black and cream trim, black roof and underbody details, except trucks grey.

From drawings of G. C. Kuhlman Car Co., and by R. R. Hubel, Detroit. Redrawn, GK

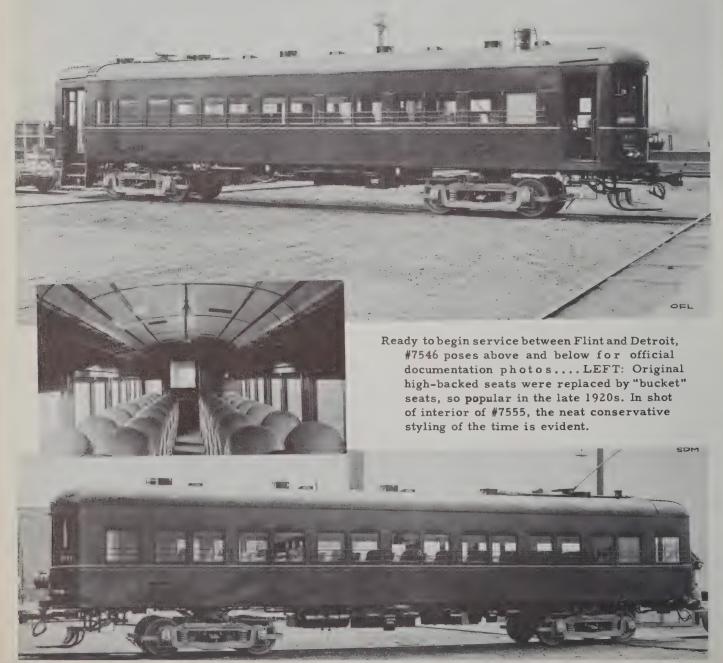
Scale: HO (3.5 mm 1')

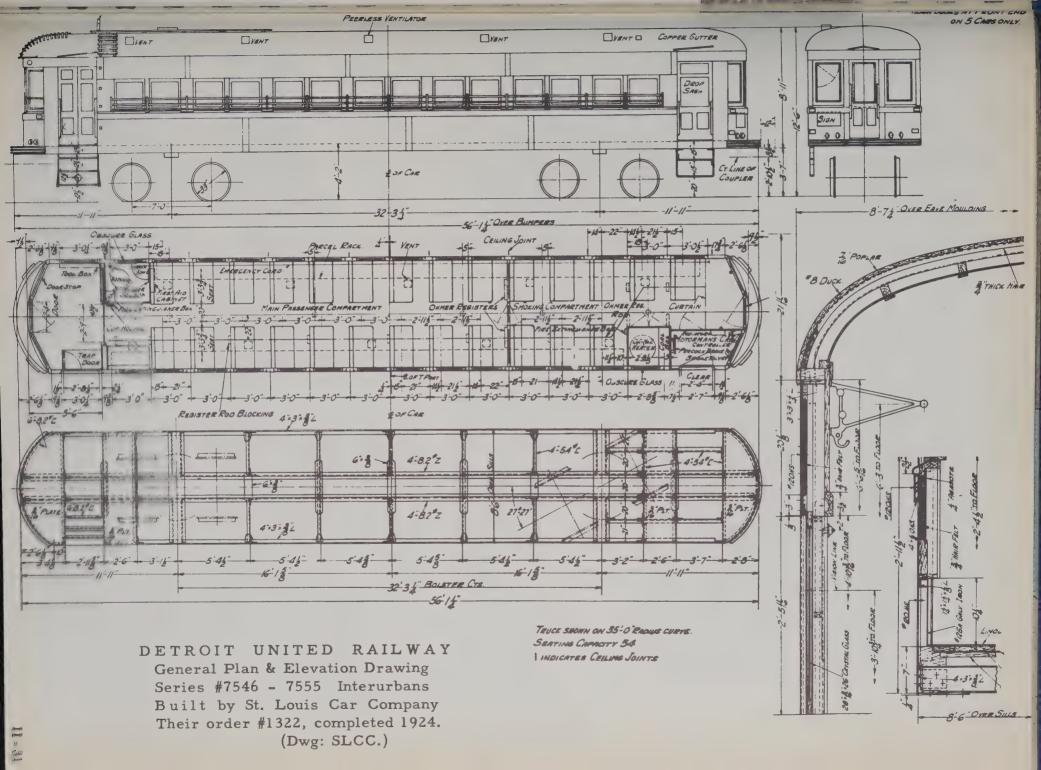




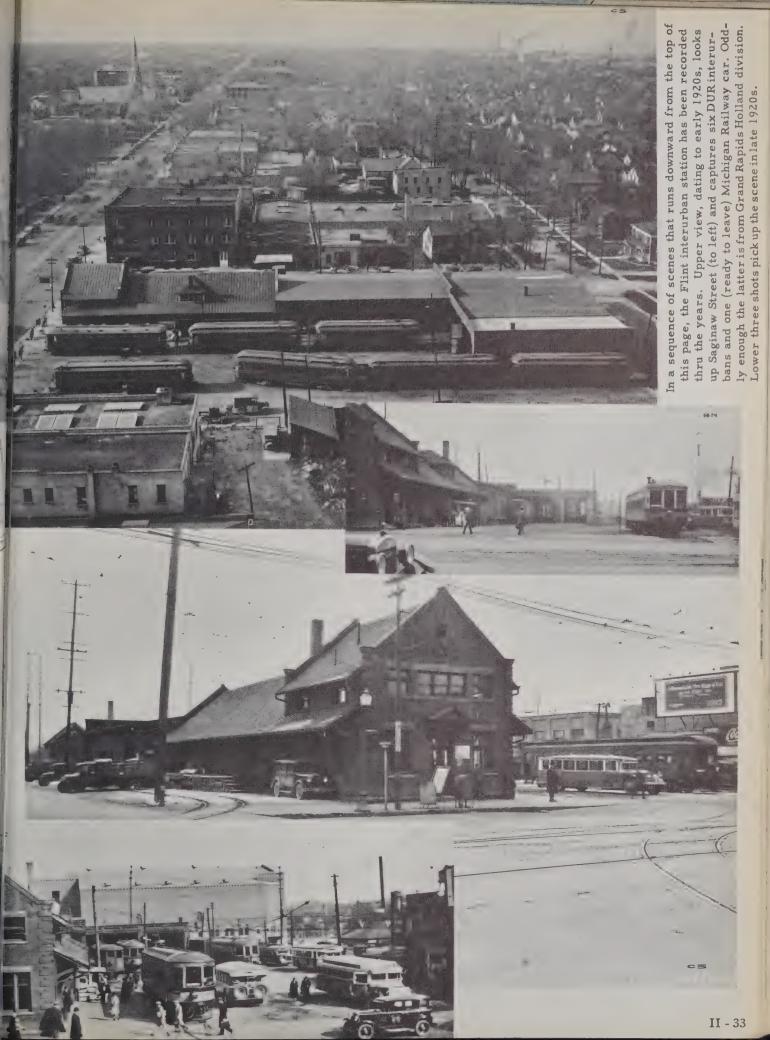
All of the 1924 St. Louis cars had train doors at the rear end. In addition, the last five had train door at the front end for extra convenience in case of two car train operation. Right: #7554 after heater fire incident dating to 1925.

















last, #2007 which ended its days as Cedar Rapids & Iowa City Railway's #55.



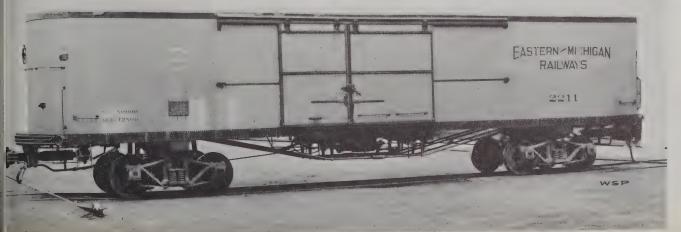


they saw only a few years of service on the Michigan line. One (#2014) was sold to the Rock Island Southern line in Illinois but was wrecked en route and was replaced by #2012 which ran out its days between Galesburg and Monmouth.

Below are two of Eastern Michigan's interurban interchange trailers which could and did get over the various Ohio and Indiana interurban roads in thru freight services.

A few of Eastern Michigan's gondola and side dump freight trailers were acquired by Indiana Railroad.









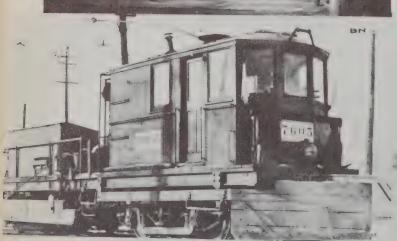
As might well be expected on so large a property, line and work cars ran the gamut from old passenger car hand-me-downs, thru carefully engineered special-purpose cars to haywired freaks improvised from 'materials on hand'.

This page:

1894 1851

2044

7605 2045

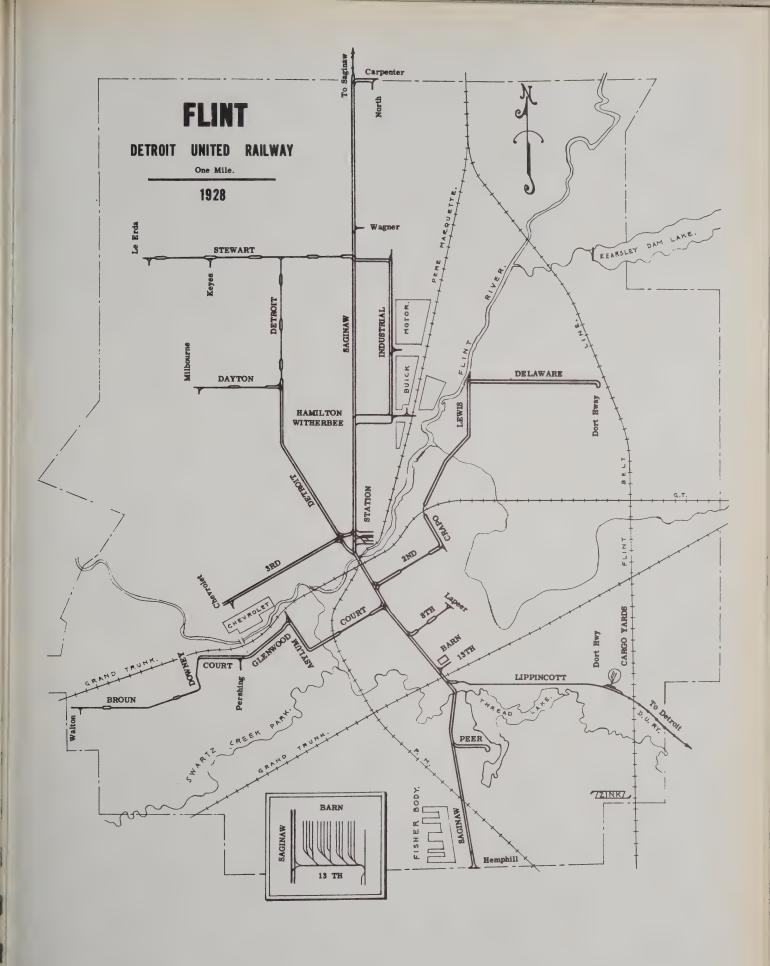


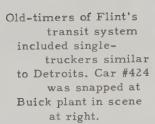














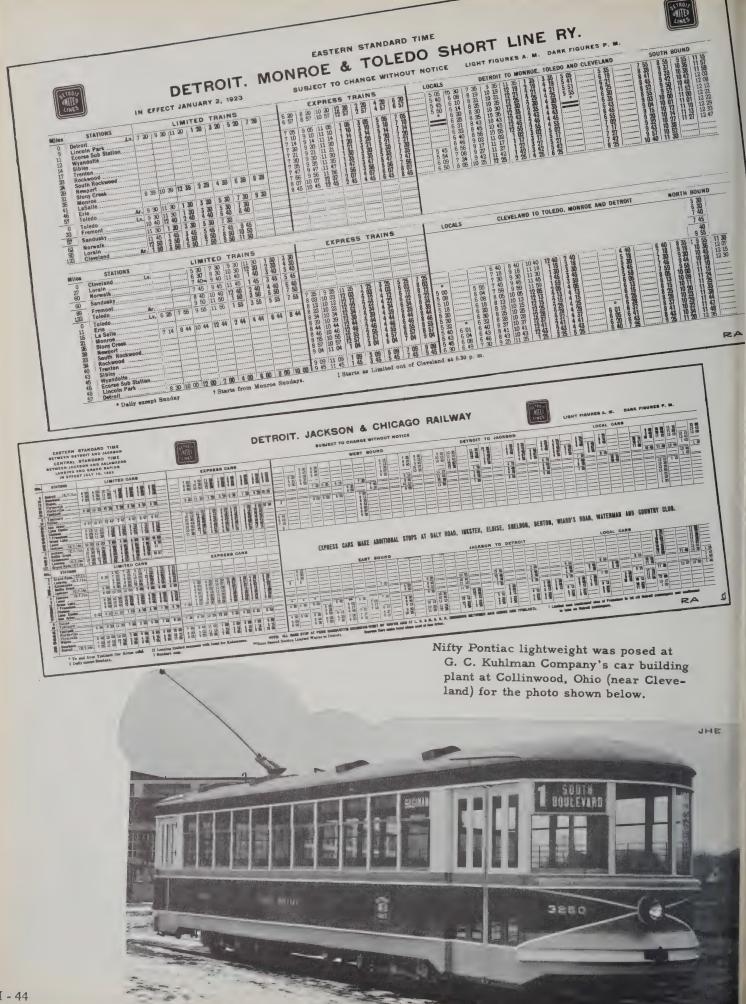


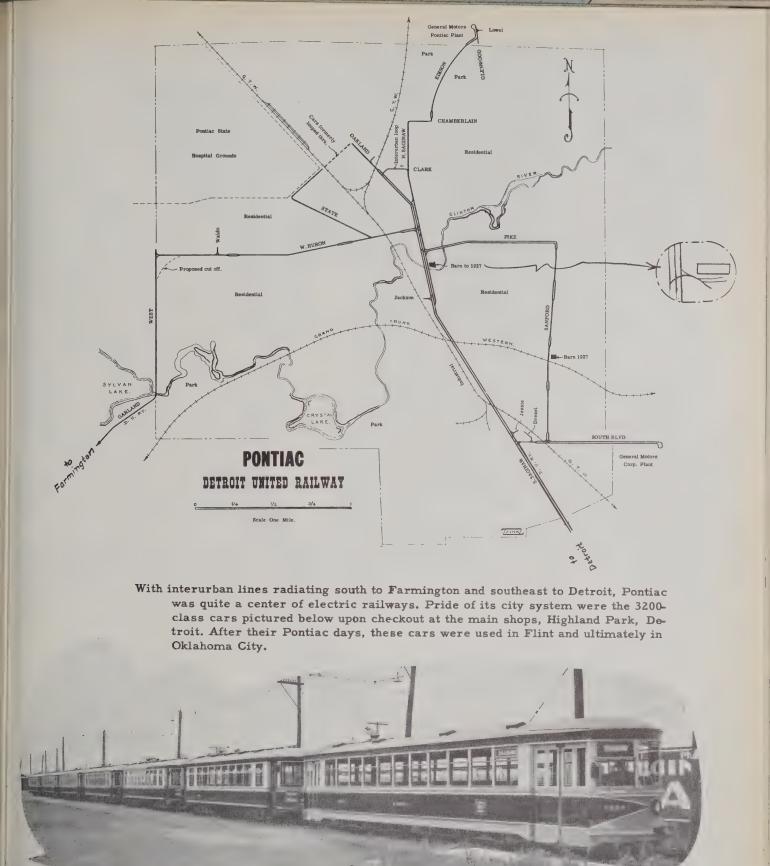
Another fascinating phase of Flint's transportation history was the operation of steam dummy trains by the North Park Railway Company, as pictured at the left. Note trolley wires already in place in lower view.

wsc

Interesting detail of
the early D.U.R.
single-truck type was
the umbrella like
canopy projection of
the roof at the front
end of the car, with
its otherwise angular
contours.







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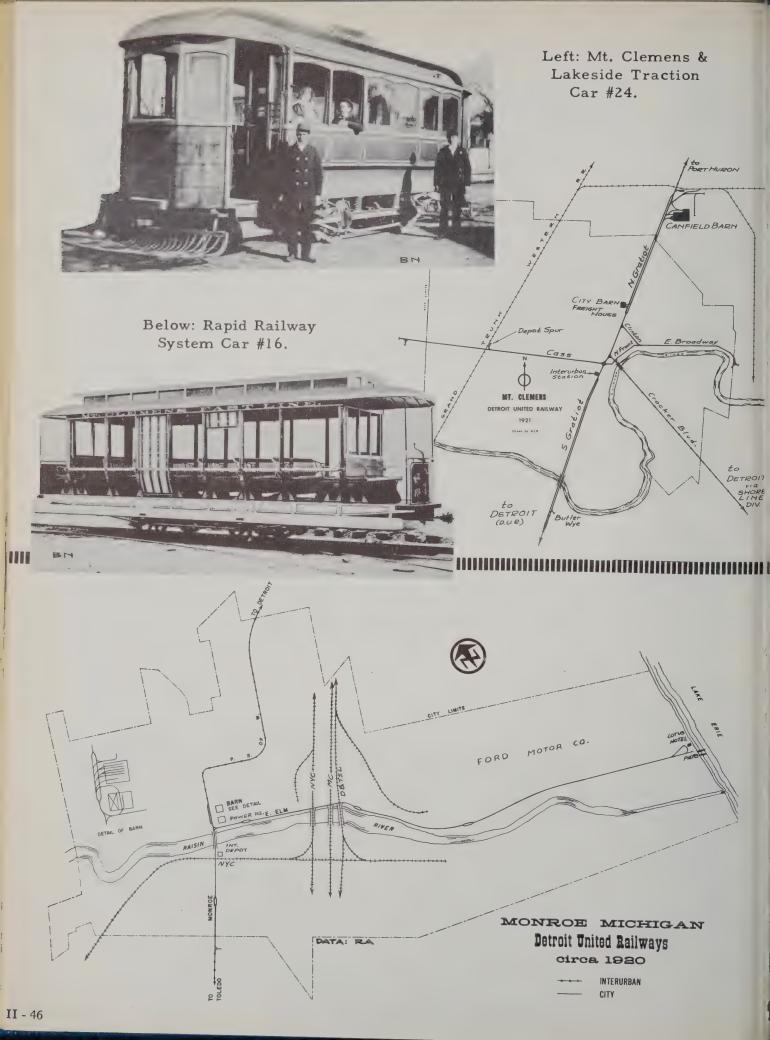
6 10 20 30 40 50 7 10 20 30 40 50 8 10 20 30 40 50 9 10 20 30 40 50 10 10 20 30 40 50

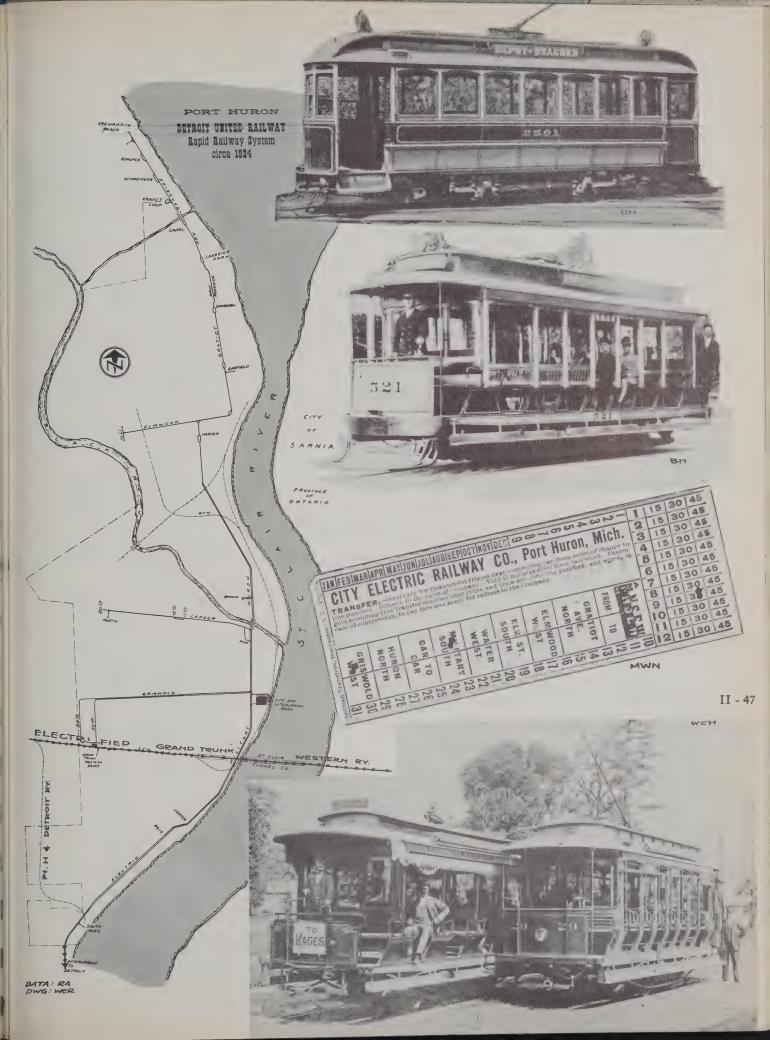
MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

50014

JAN. FEB. MAR. APR.

WSP





EASTERN MICHIGAN SYSTEM Roster of Equipment

CAR NUMBER	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF		Roster compiled by WEH, JJB, LF Listings as of maximum extent of equipment, approximately 1928 et seq
INTERU	JRBAN PASS	ENG	ER CARS	S								700, 700, 700, 700, 700, 700, 700, 700,
7000-7009	DUR	100									Deck	Orig. Detroit & Trenton 7001-7007 converted to funeral cars 1902
7051-7062	Kuhlman	100	Peckham								RR	Orig. Detroit & Northwestern, open rear vest. except 7060. Storage air
7063-7072	Kuhlman	102	мсв								RR	Open rear vest. on 7069 later closed
7073-7076	Niles	'12	Std. C80P		М	81,000	52	58'-31/2	81-9"		RR	
7077-7083	Niles	113									RR	
7084=7094	Niles	'14	Std. C80P								RR	
7095-7096	Niles	'15	Std. C80P	4WH303			50	561-5"	81-2"	12'-9"	RR	
7101-7109	Kuhlman	198									Deck	Orig. Detroit & Pontiac suburban
7110-7112	Kuhlman	105	Peckham & Brill								Deck	Storage air, 7110 instruction car
7113-7122	Cincinnati	107	Baldwin	4W562	K34	56,350	45	46'-4"	81-91/2	12'-9"		Coach
7123-7128	Cincinnati	108	Peckham	4GE93								
7129-7131	Niles	110	Baldwin	4-		66 705	45	461411	014	1213"		Detroit-Pentiac suburban same
7132-7139	Kuhlman	-	78-22A Std. C80P	WH310C	HL	55,735	45 58	54'-11"	81-9"	13'1"	Deck	Detroit-Pontiac suburban cars. Detroit-Pontiac suburban motors
				WH557A	1145		64	n	11		Deck	Trailers for 7132-7139 some later
7140-7147	Kuhlman	'16		Trail			Ų4				Deck	motorized 7151 & 7157 converted to 1-man double
7151-7158	Kuhlman	199	Baldwin								R R	orig. Detroit, Rochester, Romeo & L O
7159-7164	Jewett		Peckham MCB 10A								RR	Orig. Rapid Railway,7254 RPO Pass.
7250-7263	Barney & Smith			7 24	1/1 4	38.850	5.1	421-2"	01_118		RR	Orig. Rapid Railway,7264 con. to exp.
7264-7267	Barney & Smith		MCB 10A	Lor.34	K14						-	destroyed '15, 7268 retired 8-20
7268-7273	Barney & Smith		Dupont,B&S & Brill 27	"	H	58,400	51	-	8'-9"	12'-6"	RR	Orig. Rapid Railway
7274-7279	Kuhlman	100	91					55 '-0"	9'-0"		RR	Orig. Rapid Railway Orig. Rapid Railway passenger
7281	Barney & Smith											converted to express
7292-7297	Brill	104						52'-71/2	8'-9"		RR	Some equipped with 3rd rail shoes
7298-7308	Cincinnati	106	Baldwin		AL						RR	7303 3rd rail shoes.
7309-7310	Cincinnati		Std. C80P		,						RR	
7311-7312	Cincinnati		Std. C80P		М						RR	7312 built by Niles
7500	DUR	'06	MCB	#W121	AL			52 1-0"	8'-6"		RR	Private (Party) car
7501-7505	Brill	107									RR	7504 became line car
7506-7507											RR	
7508-7519	Stephenson	103	Peckham	4W86	L4			52 1-0"	81-6H		RR	Orig.Detroit Monroe & Toledo rebuilt to open platforms
7520-7521	Niles	'15	Std. C80P	4W303	М		50	561-5"	8'-2"	12'-9"	RR	3rd rail shoes.
7522-7529	Jewett	'15	Brill 27	4W557	ALM	81,880	50	581-31	8'-10"	12'-6"		7529 destroyed in collision at Pine Switch near Monroe in 1926
7530-7539	Kuhlman	120	Brill 27	4W557	ALF	84,000	56	58'-31/2	81-9"	12'-9"	Arch	7534 & 7538 Combos.
7540-7545	Kuhlman	120	Brill 27	Trail			70	581-6"	8 °-6"	12*-9*	Arch	Steel trailers 7551-7555 have train doors both ends. 7540 made motor.
7546-7555	St. Louis	124	Brill 27	4GE275	PC 5	68,000	54	561-1"	81-6m	12 '-6"	Arch	Steel motors 5 with front end train doors.
7556	St. Louis	'16	Brill 27		PC			531-0"			Arch	Combo Ex GRGH&M 20
7765-7771	Barney & Smith							51'-9"	81-9"		RR	Orig. Detroit Ypsilanti Ann Arbor & Jackson
7772-7774	Barney & Smith		Peckham	4W112	L4			49'-61/2	8'-6"		RR	Same as above
7775-7780	Barney & Smith										RR	
7781	Barney & Smith										RR	
7782	Barney & Smith										RR	
7783-7785	Barney & Smith	100									RR	
7790-7794	Kuhlman	107	MCB								RR	
7795-7796	Niles		Std. C80P		AL			581-41	81-9"	12"-9"	RR	3rd rail shoes.
8000-8001	DUR	124	Std. C80P	4W303	AL	85,700	30	58'-3"	81-7"	12'-11"	Arch	8000 former 7539 rebuilt by DUR 1924
8002-8003	DUR	124	Brill 27	4W557	AL	85,700	_	58'-3"	81-7"	12'-11"	Arch	Ex 7540 class
8021-8024	DUR		Std. C60P	4GE214	K34	23,700		00 -0	-	15 -11.		Parlor cars used in Detroit-Pontiac
			. 000.	102214	104							service Rebuilt from 7140 class.

Partial listing containing all known names of Eastern Michigan passenger cars:

3250 Chief Pontiac 3256 Minnewa 7086 Nottaw 7092 Iroquois 7094 Arapahoe 7311 Oricidas 7522 Delaware 7526 Menominee

1026 Yolande

7527 Algonquin 7528 Chinook

7532 Nipissing 7533 Cherokee 7534 Athapascan 7535 Minnetonka

7555 Apalachian 7556 Moskoki 7771 Seneca 7537 Tshimpshian 7538 Assinaboine 7540 Tuscarora

7543 Tecpanegan 7544 Pawnee 7546 Acolhlias 7548 Coahuilla 7550 Pottawatomie

8000 Wyandotte, ex Michigan, ex 7539 8001 Onondaga, ex Genesee, ex 7536 8021 Cayuga, ex Oakland,

8003 Chippewa 8022 Huron 8024 Sauks

CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF	REMARKS
INTERURBAN	FREIGHT MOTORS										
407	Barney & Smith										Used on Jackson division.
1930-1934			Standard								Capacity 50,000 lbs.
1935-1939	Niles	10	Std C-80P					5010"			11 11 tt
1940-1949	11	111	МСВ					11			0 и и
1977	10	13	Std C-80P	4GE214	K34d	62,600		50'4"	911"	12'6"	
1985-1988	11	15	11 11					50'1"	819"	12'2"	Capacity 50,000 lbs.
2001-2002	DUR	'16	2001-MCB 2002-Arch B	4WH 562A5		103,000					11 11 21
2004-2006	DUR	119		11				5014"			11 11 11
2007-2008	DUR	120	Std C-80P	21		79,000		56'0"	819"		2008 sold 1934 JW8NW 300
2010			81 92								Purchased second hand Sold 1942 P&W 401
2011	Kuhlman	16	Baldwin								Purchased from Grand Rapids, Grand Haven & Muskegon Railway #116
2012-2014	Kuhlman	'18	Dalowin					5010"			Purchased 1929 from B&LE C9-C11. 2012 sold 1934 Rock Island Southern
7264	Barney & Smith		B & S	Lorain 34	K14	38,850		4212"	8'11"		Wrecked 1909, rebuilt at Harper yd.
7801	B N	"	11	4GE214	K14	58,380		49'6"	910"	12'7"	Destroyed May 4. 1921.
7803	11 11	11	11	105214	H	59,080		4918"	8'10"	12.7	Destroyed at Oakwood Feb. 1930.
INTERURBAN	FREIGHT TRAILEF	112	Standard	Trail				41 '5"			Capacity 60,000 lbs.
	Niles		Diamond	ligil		1				10104	
1989		115	Arch Bar Standard			34,760		50'1"	819"	12'2"	Scrapped at Oakwood July 1931.
2100-2122	Cincinnati	116		11		32,080		50101	818"	1215"	Capacity 50,000 lbs.
2123-2147	Kuhlman	120	ACF	11		32,200		50'0"	9'1"	12'4"	Capacity 60,000 lbs.
2148-2197	ACF	124	Arch Bar	"		41,500		49'10"	9'1"	12'9"	Capacity 80,000 lbs.
Unidentifi	ed freight trai	llers									0 0
LOCOMOTIVE		.14								11110"	
1981	DUR	'14	Brill 27F	4WH56	K14	42,000		31'1"	8'6"	11'10"	Sold to DSR Sold 1936 to International Nickel
1981 2000	DUR DUR	115	Brill 27F	4WH56 4WH 301D6						11'10"	Sold to DSR Sold 1936 to International Nickel Company 109
1981 2000 2003	DUR DUR DUR	'15 '16	Brill 27F Baldwin Brill	4WH56 4WH 301D6 4WH 562A5	K14 HLF	42,000		31'1"	816"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steenle cab
1981 2000 2003 2009	DUR DUR DUR DUR	'15 '16	Brill 27F	4WH56 4WH 301D6 4WH 562A5	K14 HLF	42,000		31'1"	816"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55
1981 2000 2003 2009	DUR DUR DUR DUR	'15 '16	Brill 27F Baldwin Brill	4WH56 4WH 301D6 4WH 562A5	K14 HLF	42,000		31'1"	816"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55
1981 2000 2003 2009	DUR DUR DUR DUR	'15 '16	Brill 27F Baldwin Brill	4WH56 4WH 301D6 4WH 562A5	K14 HLF	42,000		31'1"	816"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow
1981 2000 2003 2009 SERVICE CA	DUR DUR DUR DUR DUR DUR	'15 '16	Brill 27F Baldwin Brill Std C-60P	4WH56 4WH 301D6 4WH 562A5	K14 HLF	42,000		31'1"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " " Supply Car ST concrete mixer. Used by DUR
1981 2000 2003 2009 SERVICE CA 1843 1851,1891	DUR DUR DUR DUR DUR DUR DUR	'15 '16 '26	Brill 27F Baldwin Brill Std C-60P	4WH56 4WH 301D6 4WH 562A5	K14 HLF	42,000		31'1"	816"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " "
1981 2000 2003 2009 SERVICE CA 1843 1851,1891 1951	DUR DUR DUR DUR DUR DUR RS DUR DUR Niles	'15 '16 '26	Brill 27F Baldwin Brill Std C-60P	4WH56 4WH 301D6 4WH 562A5 4WH 562A3	K14 HLF HLF	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " Supply Car ST concrete mixer, Used by DUR track department, Scrapped April '2 Double truck work car and plow,
1981 2000 2003 2009 SERVICE CA 1843 1851,1891 1951 1975	DUR DUR DUR DUR DUR DUR RS DUR DUR Niles DUR	'15 '16 '26	Brill 27F Baldwin Brill Std C-60P Standard Taylor	4WH56 4WH 301D6 4WH 562A5 4WH 562A3	K14 HLF HLF	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " Supply Car ST concrete mixer. Used by DUR track department. Scrapped April '2 Double truck work car and plow. Single truck sweeper. Used in Flint
1981 2000 2003 2009 SERVICE CA 1843 1851,1891 1951 1975	DUR DUR DUR DUR DUR DUR DUR DUR DU	'15 '16 '26	Brill 27F Baldwin Brill Std C-60P Standard Taylor Std C-80P	4WH56 4WH 301D6 4WH 562A5 4WH 562A3	K14 HLF HLF	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " Supply Car ST concrete mixer. Used by DUR track department, Scrapped April '2 Double truck work car and plow. Single truck sweeper. Used in Flint
1981 2000 2003 2009 SERVICE CA 1843 1851.1891 1951 1975 1976 2041	DUR DUR DUR DUR BS DUR DUR Niles DUR DUR McGuire-Cumm,	'15 '16 '26	Brill 27F Baldwin Brill Std C-60P Standard Taylor Std C-80P McG-C.	4WH56 4WH 301D6 4WH 562A5 4WH 562A3	K14 HLF HLF	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " Supply Car ST concrete mixer. Used by DUR track department. Scrapped April '2 Double truck work car and plow. Single truck sweeper. Used in Flint
1981 2000 2003 2009 SERVICE CA 1843 1851.1891 1951 1975 1976 2041 2042	DUR DUR DUR DUR DUR DUR DUR DUR D	'15 '16 '26	Brill 27F Baldwin Brill Std C-60P Standard Taylor Std C-80P McG-C. Brill	4WH56 4WH 301D6 4WH 562A5 4WH 562A3	K14 HLF HLF K34 K35 K35	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " Supply Car ST concrete mixer. Used by DUR track department. Scrapped April '2 Double truck work car and plow. Single truck sweeper. Used in Flint " " " " " " " Single truck switcher Double truck work car and plow
1981 2000 2003 2009 SERVICE CA 1843 1851.1891 1951 1975 1976 2041 2042 2043–2044	DUR DUR DUR DUR DUR DUR DUR Niles DUR DUR McGuire-Cumm, Brill DUR DUR DUR	'15 '16 '26	Brill 27F Baldwin Brill Std C-60P Standard Taylor Std C-80P McG-C. Brill St.Louis	4WH56 4WH 301D6 4WH 562A3 562A3 	K14 HLF HLF K34 K35 K35	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " Double truck work car and plow supply Car ST concrete mixer. Used by DUR track department. Scrapped April '2 Double truck work car and plow. Single truck sweeper. Used in Flint " " " " " " " " " " "
1981 2000 2003 2009 SERVICE CA 1843 1851.1891 1951 1975 1976 2041 2042 2043-2044 2045	DUR DUR DUR DUR DUR RS DUR DUR Niles DUR DUR McGuire-Cumm, Brill DUR DUR	'15 '16 '26 '12	Brill 27F Baldwin Brill Std C-60P Standard Taylor Std C-80P McG-C. Brill St.Louis MCB Arch Bar	4WH56 4WH 301D6 4WH 562A3 562A3 	K14 HLF HLF K34 K35 K35	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " " Supply Car ST concrete mixer. Used by DUR track department, Scrapped April '2 Double truck work car and plow. Single truck sweeper. Used in Flint " " " " " " " " Single truck switcher Double truck work car and plow " " " " " " " " " Double truck work car and plow Single truck switcher Double truck work car and plow Differential dump, sold to ISC 1931
1981 2000 2003 2009 SERVICE CA 1843 1851.1891 1951 1975 1976 2041 2042 2043-2044 2045 2046	DUR DUR DUR DUR DUR DUR DUR Niles DUR McGuire-Cumm, Brill DUR DUR DUR DUR DUR DUR DUR	'15 '16 '26 '12 '12 '12 '17	Brill 27F Baldwin Brill Std C-60P Standard Taylor Std C-80P McG-C. Brill St.Louis MCB Arch Bar	4WH56 4WH 301D6 4WH 562A3 562A3 	K14 HLF HLF K34 K35 K35	42,000		31'1" 32'7" 36'10"	816" 816" 814"	13'0"	Sold to DSR Sold 1936 to International Nickel Company 109 Wood body Steel steeple cab Sold 1935 to Crandic #55 Double truck work car and plow " " " " " " " Supply Car ST concrete mixer. Used by DUR track department, Scrapped April '2 Double truck work car and plow. Single truck sweeper. Used in Flint " " " " " " " " " Single truck switcher Double truck work car and plow " " " " " " " " " " " " " " " " " " "

CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF	REMARKS
SERVICE CA	RS (Cont.)										
2091	DUR	119	Dupont	2GE203	K35	23,380		23'1"	712"	11'6"	Single truck plow and work car.
2092	DUR	119	Dupont	2WH68	K12	23,380		23'1"	712"	11'6"	ST construction car, scrapped 1930
2094	Byram & Co.	119					_	25 1.71	819"	7'10"	Track welder, scrapped 1924.
2096											Double truck crane
2098	DUR	120				52,500	<u> </u>	15'0"	910"		Crane, scrapped prior to 1928.
2099			Brill				_				Electric crane.
7264	DUR		МСВ				<u> </u>				Double truck plow and work car.
7284	DUR		Standard								Line car, to DSR #7284.
7604-7605	DUR		MCB								Double truck plow and work car.
7761	DUR		Baldwin					34 14 11	8'1"	13'3"	Double truck line car, Line car. Rebuilt 1923. From DP&N
7763	DUR		Dupont								Sold to Shaker Heights 101.
7804-7805	DUR		мсв								Double truck plow and work car. Double end line car. Rebuilt from
7813	DM&T Ry.	107	Brill 27F	4WH 56	K14		_	29'0"	812"		#1164 at Monroe. Scrapped 1930.
7866											Switcher
MISC. CARS				,							
1907-1916	ACF	106	Diamond Arch Bar					34 15"	8'10"		Box cars. Equipped with Tomlinson couplers.
1990-1999	Russell	115	Diamond Arch Bar			35,100		42'4"	814"	131411	Box cars. Equipped with MCB radial couplers, 60,000 lbs. capacity.
2050-2075	ACF	116	Arch Bar			30,500		40'0"	819"		Flat cars. 60,000 lbs. capacity. 2072 rebuilt into milk car.
2076											Flat car. 50,000 lbs. capacity.
7280,7602											Cabooses
7609-7620			Arch Bar								Flat cars. 7610 ex DMRT box car 202 cut down at Harper yards.
7621-7633	ACF	108	Arch Bar								Flat cars. 7621-7622 rebuilt to gond olas, as were 7627, 7629, 7631, 763
7644,7646	ACF	108	Arch Bar			18,040		3618"	8'10"		
7647	ACF	122	Arch Bar					3613"	912"		Flat cars Capacity 32,000 lbs. Box car. DM&T rebuilt it to bunk ca: #7825. Later #7812. To #7647 in 192
7649,50,52											Flat cars.
7690-7699	ACF	130									Ballast cars. Sold IRR '34 #1060-69
7700-7707	ACF	129				40,000					Ballast cars.
7708-7735	Pressed St.	129	Barber			33,000					Dump cars. 100,000 lbs. capacity.
7807	ACF	108	Arch Bar					3312"	818"		Flat car. 32,000 lbs. capacity.
7808	ACF	115	Arch Bar			44,320		36 12"	9'0"	11'6"	Sand blast car. Rebuilt from flat c. in July 1914. Scrapped 1926.
7809-7810	ACF	108	Arch Bar					3814"	91411		Flat cars. 32,000 lbs capacity.
7811	DY & AA Ry	108	-			30,200		391711	911"		Dump cars.
7814-7823	Russell	107	Diamond Arch Bar					3014"	8181		Flat cars. 36,000 lbs capacity.
7826	R&N Ry	109						11'4"	615"		
CITY AND SU	UBURBAN CARS										
1330-1339		'19						271-9"			Biroovs
1340-1355		120						28'-0"			Birneys. Used in Pontiac, Flint and Port Hur
3126-3149	DUR	119	Std 0-50	4GE203	K35G	46,800	46	46'-8"	81-211	11'-10	Birneys, had rear doors. City cars, used in Flint. Pulled
3200-3229	St. Louis	125	Brill 77EX	4W508	K35G	29.140		41'-11'		10'-9"	trailers 5224-5249 at one time.
3230-3249	St. Louis		Brill 77EX		K35G	28,500		421-6"	0 -1	10 -7	City cars used in Pontiac and Flint
3250-3259	Kuhlman		Brill 177	4GE258	K75	30,000			81.51	10'-5"	City cars used in Pontiac and Flint City cars used in Pontiac and Flint
3301-3310	Kuhlman	125	Brill			37,500			0 - 0	-J.	Sold 1937 to Oklahoma Rys. 141-150. Detroit-Pontiac suburban cars.
5224-5239	DUR	120		Trail		28,000		461-8			Rebuilt to city cars, used in Flint
	DUR		Standard				-	408-			Trailers used in Flint. Trailers, later motorized and used



FLINT DIVISION



IN EFFECT FEBRUARY 27th, 1923

O Starts from Car House.

SUBJECT TO CHANGE WITHOUT NOTICE.

LIGHT FIGURES A. M. DARK FIGURES P. M.

Mis.	STATIONS	LIMITED TRAINS	EXPRESS TRAINS	LOCAL TRAINS NORTH	BOUND
222	Detroit Lv. Royal Oak West Utica Rochester Junction Junction Washington Romeo Almont Lulay City Orford Y Ortorville "Acounties "Atlas Fiint Ar Saginaw Ar Bay City Ar Ar Saginaw Ar Bay City Ar Ar Saginaw Ar Bay City Ar	6 10 8 10 10 10 10 12 10 2 10 4 10 6 10 8 10 7 05 9 05 11 05 3 305 5 05 7 05 9 05 9 05 9 05 9 05 9 05 9	7 10 9 10 11 10 1 10 3 10 5 10 7 10 8 05 10 05 12 05 2 05 4 05 6 05 8 05 8 05 8 40 10 40 12 40 2 40 4 40 6 40 8 40 8 40 8 40 8 40 10 40 12 40 2 40 4 40 6 6 40 8 40 8 40 8 40 8 40 8 40	1	8 30 10 30 11 45 9 25 11 25 12 40 9 25 11 55 1 12 40 9 55 11 55 1 15 0 05 12 06 0 0 15 12 15 0 0 05 12 25 0 0 05 12 25 0 0 12 25 0 0 12 25 0 12 26
116 Mis.	Bay CityAr.	10 20 12 20 2 2 20 4 20 6 20 8 20 10 20 12 20 11 05 1 05 3 05 5 05 7 05 9 05 11 05 1 05	EXPRESS TRAINS	LOCAL TRAINS SO	UTH BOUND
00 155 477 100 122 118 288 281 400 466 466 466 466 466 466 466 466 466	SIAHUNS Bay City Lv. Saginaw Lv. Flint Lv. *Atlas Godrich Ortonville Oxford Y Orton Junction Imlay City. Almont Romeo. Washington Junction Rochester West Utica Royal Oak Detroit. Ar.	** 6 15 8 15 10 15 12 15 2 15 4 15 6 15 5 00 7 00 9 00 11 00 1 00 3 00 5 00 7 00 9 00 11 00 1 00 3 00 5 00 7 00 6 20 8 20 10 20 12 02 2 20 4 20 6 20 8 20 8 20 6 20 8 20 10 20 12 20 2 20 4 49 6 49 6 8 49 10 49 12 45 2 45 4 49 6 45 8 45 6 64 9 8 49 10 49 12 49 2 49 4 49 6 49 8 49 8 49 8 49 6 6 7 8 57 10 57 12 57 2 57 1 4 57 6 57 8 57 10 57 12 57 12 11 12 11 12 3 12 3 12 5 12 7 12 9 12 11 12 11 2 3 12 3 12 5 12 7 12 9 20 11 20 1 20 3 20 5 20 7 20 9 20 11 20 1 20 3 20 5 20 7 20 9 20 11 20 1 20 3 20 5 20 7 20 9 20 11 20 1 20 3 20 5 20 7 3 4 9 34 11 34 1 34 3 34 5 34 7 34 9 34 1 34 3 34 5 34 7 34 9 34 1 34 3 34 5 34 7 34 9 35 3 3 3 5 8 3 5 7 35 9 35 8 8 02 10 02 12 02 2 02 4 02 6 02 8 02 10 02	7 10 9 10 11 10 1 10 3 10 5 10 7 10 7 10 7 10 7 10 7 10 7 10 7	† 4 30 4 58 5 525 5 50 6 33 5 10 6 62 6 50 6 50 - 6 50 - 7 05 - 9 10 11 10 1 10 3 22 3 22 1 2 3 22 3 22 1 4 0 3 40 1 5 6 5 6 6 5 5 5 25 7 22 9 22 11 22 1 4 0 3 40 1 5 6 5 5 6 6 5 5 5 05 6 5 5 5 6 5 5 6 5 6 6 6 6 8 38 7 20 8 10 9 10 10 11 10 1 10 2 10 5 10 5 6 5 6 5 6 6 6 6 7 7 20 8 10 9 10 10 10 11 10 1 10 2 10 2 10 5 15 6 5 6 5 6 6 6 6 7 7 20 8 20 9 20 10 20 12 12 2 12 21 22 12 22 32 32 4 422	Harmon 10 30 10 53 10 53 10 53 10 53 10 53 10 53 10 53 10 53 10 53 10 53 10 53 10 54 10

^{*}Limited cars stop at Geodrich and Atlas north-bound, only to let off passengers from Detroit, and south-bound only to take on passengers for Detroit, _____ Makes local Stops north of Rochester. †Daily except Sundays and Molidays. Daily accept Saturdays, Sundays and Holidays, **Makes local stops between Flint and Oxford.

P Does not run North of Rochester Sundays and Holidays.

Express Trains make limited stops between Detroit and Rochester; all Local stops in Rochester and Stop on Signal between Rochester and Flint.



EASTERN STANDARD TIME

FLINT DIVISION



DETROIT, ALMONT & NORTHERN RAILROAD IN EFFECT SEPT. 21ST, 1916 BUBJECT TO CHARGE WITHOUT NOTICE DETROIT TO IMLAY CITY, FLINT AND BAY CITY LOCALS LIMITED TRAINS STATIONS E. T. Lw Lake Orion Jet. Lv. Washington Almont Imlay City E. T. Ar. LOCALS BAY CITY, FLINT AND IMLAY CITY TO DETROIT SOUTH BOUND Min. STATIONS LIMITED TRAINS Bay City (C. T.) Lv. Sagrinaw (C. T.) Lv. Flins, W. R. E. I. Lv. Alaa Goodrich Ortonville Oxford Y. Orton Lake Orion Jes...... Imlay City E. T. Lv.

> *Limited cars stop at Goodrich and Atlas north bound only, to let off passengers from Detroit, and south Sound, only to take on passengers for Detroi Daily except Sunday

ISundays only North of Oxford |Sundays only. tStarts from Car House

Norg.-6.20 a. m. limited out of Imlay City runs as local to the Junction Norg. -All limiteds between Detroit and Imlay City stop at Dryden Corner

w Makes local stops between Rochester and Royal Oak Waiting Room.

Detroit, Jackson & Chicago Railway



TAKING EFFEC

AT 4:00 A. M.

EASTERN STANDARD TIME

FOR THE INFORMATION AND GUIDANCE OF EMPLOYEES ONLY

TIME TABLE HOLIDAYS - New Years, Decoration Day, July 4th, Labor Day, Thanksgiving and Christmas.



H. D. SANDERSON Manager for Receiver JACKSON, MICHIGAN

W. J. MURPHY General Superintendent YPSILANTI, MICHIGAN

Time Table No. 2 taking effect Sunday, june 2, 1929, Superceding Time Table No. 1, Dated August 28, 1928

Jackson to Detroit

26 | 24 | 22 | 20 | 180 | 176 | 174 | 172 | 18 | 170 | 16 | 168 | 166 | 164 | 162 | 160 | 158 | 156 | 154 | 12 | 152 | 150 | 148 | 8 6 MILES 1.60 5 28 2 17 5 35 10 18 6 05 5 00 8 22 12 18 4 17, 6 50 10 22 12.90 8 28 12 22 6 17 5 12 6 18 5 13 10 05 10 28 6 56 4 181 2 22 15.36 Hoppe 3 65 Clio 6.95 Chelsea 2 33 Vickers 2 19 4 22 12 28 10 33 7 00 2 28 10 17 --8 18 17.73 4 28 167 4 33 12 33 10 18 10 36 2 331 21.38 6 28 5 24 8 22 12 361-10 22 2 36 10 39 8 28 22.33 6 33 5 28 8 42 12 39 10 28 10 42 Center 8 33 2 39 24.66 6 36 5 31 8 47 4 39 4 442 4 47 4 47 4 39 12 42 10 33 10 47 Leon 2 42 8 49 6 8 36 6 39 5 34 12 47 10 36 7 21 8 53 153 8 57 1 2 47 6 42 5 35 12 49 7 25 10 39 Gruner 10 53 2 49 6 47 5 42 6 49 5 44, \$\frac{2}{2}\$ 4 49 6 53 5 48 \$\frac{2}{2}\$ 4 53 6 57 5 52 4657 31.48 12 53 10 42 10 57 8 47 35 71 Clio 37.00 Chelses Vickers 40.24 Warsaw 42 04 44.38 45.6 Barry 45.9 Glendale 48.9 Ann Arbor BatesWaterman Hillside 8 43 7 43 6 43 6 07 5 17 8 48 7 48 6 48 6 11 5 21 Normal 58.00 7 50 6 50 6 13 5 23 8 52 7 52 6 52 6 16 5 26 60.08 Burrell 5 06 4 06 3 06 2 06 1 06 12 06 11 06 10 (ab. 8 54 7 54 6 54 6 19 5 29 61.33 Davis 5 05 4 08 3 08 2 08 1 08 12 08 11 08 10 08 6 03 8 57 7 57 6 57 6 22 5 32 9 05 8 05 7 05 6 30 5 40 62.58 Beck 5 10 4 10 3 10 2 10 1 10 12 10 11 10 10 10 8 05 7 03 10 00 ...-65.31 Cook 12 00 10 03 8 06 7 06 6 00 5 12 4 12 3 12 2 12 1 12 12 12 11 12 10 12 68 12 9 08 8 08 7 08 6 33 5 43 8 08 7 08 ---- 6 08 12 03 5 20 4 20 3 20 2 20 1 20 12 20 11 20 10 20 . 10 06 Wayne, W R 12 06 69.65 9 11 8 11 7 11 6 36 5 46 6 10 5 23 4 23 3 23 2 23 1 23 12 23 11 23 10 23 , 10 081. 8 10 7 10 ... 78.18 9 51 8 51 7 51 7 15 6 25 AM AM AM AM AM AM Loc DEXID. 1 N. Lby Loc Curus 12 08 6 12 10 10 5 25 4 25 3 25 2 25 1 25 12 25 11 25 10 25 8 12 7 12 --MILES Eloise 12 10 5 25 4 25 3 25 2 25 1 29 12 25 11 25 25 11 05 12 05 11 6 20 . 10 12 26 24 22 20 180 176 174 172 18 170 16 168 166 164 162 160 158 156 154 12 152 150 148 8 6 8 20 7 20 --Inkster 12 12 6 23 2 Westwood · Register Stations. Dearborn Shaler

Regular scheduled meeting and passing points. ALVINO The number of numbers and passing points are heavy face type and underscored train number he scheduled on train or trains so the new for passing to enter or passed are shown in small state and passing that training or prains so the new for passed are shown in small state and passing points as follows as one time. The property of the passed for the passed are shown in small state and passing points are passed and passing points. A Lake, take and passing points are passed passed are shown in small passed by the passed passed passed and passing points are passed passed and passing points. A Lake take and passing points are passed LOCATION OF TRAIN ORDER SEMAPHORES Train No. 186 will do local work from Ypsilanti to Detroit. Express Trains will in addition to making regular Limited stops, stop on signal Westwood, and all local stops between Wayne and Ann Arbor. GENERAL INSTRUCTIONS terminate of a train outbound from Defort is delayed at any point before reaching the substitution of the process of th LOCATION OF STANDARD CLOCKS The limits of stablished varile will be designated by varid limits signs. All trains as per rule, as per rule, as per rule, as a sign of the stablished varile will not stablished varid single signs. All trains as per rule, as a sign of the war not renewe trains using the main track within yard limits from protecting themselves as per rule. An inferior train miss at all times clear or protect against a superior train. Detroit of a point 600 feet west of west end of Bender. Yusilanti-vard limit extends from a noint 200 feet. East of the East and the East of the Ea yard limits extend from Detroit to a point 600 feet west of west end of Bender. Ypsilanti yard limit extends from a point 600 feet west of west end of Bender. Ann. Assumed Limit extends from a point 300 feet west end of Normal double Track. City of Dearborn— SPEED ORDINANCES Trains must not be operated at a greater speed than twelve (12) miles per hour the limits of said city. Trains must not be operated at a greater speed than twenty (20) miles an hour within the limits of said to the operated at a greater speed than twenty (20) miles an hour within the limits of said to the operated at a greater speed than twelve (12) miles an hour within the limits which catendary at a greater speed than twelve (12) miles an hour within the limits which extend from at a greater speed than twelve (12) miles an hour within an hour outside the fire limits. COMPANY SURGEONS AND AMBULANCES date Siding to a point 2000 feet West of the West end of Normal double Track date Siding to a point 2000 feet East of Wests Street to the West point 1000 feet best of West point of Gienle Siding to a point 2000 feet East of Wells Street. Jackson Yard Limit extends East to corner of Pearl and North Park Streets. LOCATION OF RAILROAD CROSSINGS AND HOW On Michigan Ave. at Hammond Ave. Detroit, crossing P. M. R. tracks. Properties, crossing Ave. Act and Properties, crossing P. M. R. tracks. Properties of Steam road trainment. Reduce speed by disc light signals on electric track, properties of the properties of th COMPANY SURGEONS AND AMBULANCES De Philip Riley ANN ARBOR ANN ARBOR YPSILANTI Street, Phone 1979 847, Office Residence, Office SB, Rellogg, Dr. D. L. Sherwood. Street, Phone 4452, Phone 6148 Call Police Department if Ambulance is Needed. Lasaline sidence 1454 Call Police Department if Ambulance is Needed. duced speed, in absence of signal to stop. Three-quarters of a mile East of Hillside Siding, crossing N. Y. C. R. R. tracks. Protected by half inter-tocker, operated by Conductor after patrolling crossing. N. Y. C. R. R. tracks. Protected by Ights operated by toverman. To be patrolled by Conductor. To be patrolled by Conductor. The nearest Company Surgeon should be called when his services are required. If the carried the forms of some should be called when his services are required. If pital, and the accident reported induced party should be called the reports are reported induced party. Should be called the reports are reported induced party should be called the reports are reported in duplications. Accident reports are reported in duplications of the machine of the promptly and forwarded to General Superinterdent. M. J. Murnhy, General Superintendent. Detroit to Jackson 5 Jackson, W. R. 1.63 Chapin 1.14 Page 2.10 Center 7 WEST BOUND-Read Up Loc. Loc. 9 11 155 157 159 161 163 165 167 Loc. 153 Loc 74.55 7 45 Lim. Center 3.14 5 56 5 48 5 40 3.14 Graz Lake Graz Lake 1.72 Graz Lake 1.73 Graz L Time Table No. 2 taking effect Supercoding June 2, 18:29 effect Supercoding Time Table No. 1 Dated Aug. 29, 1822 64.9 63.22 Sundays and Holidays 60.82 25 58.44 27 54.80 53.85 Vickers 2.10 Writanu Writanu 2.33 Dester 2.23 Logel 2.20 2.20 Clendale 1.27 Ann Arbor Ann Arbor 3.1.00 2.20 Waterman 51.52 49.3 46.98 44.70 42.44 Chapin Page 40.47 Leoni 6 45 6 45 6 40 1 0 55 6 32 6 47 6 23 6 38 6 18 6 33 6 19 6 27 6 10 6 25 6 30 6 38 39.18 38.14 35.94 Normal 105 Ypailanti 0.28 Dunn 3.06 Burrell 5 40 5 36 5 32 Hoppe Clio Chelsea 34.14 31.80 30.55 Chelses Vickers Warsaw Dexter Piegel Barry 30.27 5 27 5 25 27.21 26.12 24.03 21.4 19.5 Ann Arbo 18 1 Waterman Hillside 16.10 14.85 13.60 10.8 8.06 Burrell Davis Beck 6.53 0.00 Loc. 3 5 7 9 o Will De Lecal Werk between Detroit and Wayne. * Register Station II - 53

SPECIAL INSTRUCTIONS

- - All trains will make local stops on signal
- For movement not provided for in the time table, train orders will be issued by Dispatcher on duty. They must not contain information or Determine the table to see the table to see the table table to see the table ta
- D If for any reason, a train is unable to proceed on its time table reports and the crew are unable to get into communication with Dispatcher over Company telephone, they must make every reasonable effort to get the Dispatcher by long distance over the nearest telephone.

 STANDARD CLOCKS are located in Dispatchers office at Oxford Company telephone and the Company telephone are the Company telephone and t
- A. Regular achebuled meeting points are heavy face type and underscored.

 The number or numbers of train or trains to be met are aboven in small type above the scheduled meeting time. All trains will approach end of double track and meeting points are supported and approach and of double track and meeting points are supported and approach and of double track and meeting points are supported and as are into detail switches are seen to be right and at meeting points know that the expected trains or trains have arrived and are into detail details and are into detail details.

 All trains will approach end of double track and meeting and the support and the meeting points are the support and the su

RAILROAD CROSSINGS

SPECIAL INSTRUCTIONS ARE ISSUED GOV-ERNING THE OPERATION OF TRAINS OVER ALL RAILROAD CROSSINGS AT GRADE.

One thousand feet South of Yale, crossing Solvay R. R. racks:

ERNING THE OPERATION OF TRAINS OVER ALL
RAILROAD CROSSINGS AT GRADE.

LOCATION OF RAILROAD CROSSINGS
AND HOW PROTECTED

Sibley, creating L. S. & M. S. R. R. tracks. Protected by dwarf signal, gates and derail, operated by steam road trainment.

LOCATION OF DRAW BRIDGE
RIVER ROUGE
All cars must come to a full stop before passing the sema
phores or "Stop" signs which protect draw-bridges.

YARD LIMITS

All trains must approach and pass through the limits of established yards under full control. This will not relieve trains using the main track within yard limits from proteiting themselves as per rele. An inferior train must at all unest elear or protect against a superior train. The limits of established yards are decaprated as followed:

Now Yard Limit extends from a point 500 feet North Morror Yard. Limit extends from a point 500 feet North Morror Yard. Limit extends from a point 500 feet North Morror Yard. Limit extends from a point 500 feet North Morror Yard. Limit extends from a point 500 feet North Morror Yard. Limit extends from a point 500 feet North Morror Yard. Limit extends from a point 500 feet North of Xeror Section 2018. The point of Person Section 2018 of Person 2018 of Per

COMPANY SURGEONS

Alternate
Dr HARRY LEWIN,
Office, 810 Hoffman Bild
Phone, Randolph 738
Residence 2247 Taylor AvePhone, Euclul 1112

MONROE
Dr. D. DAWE.
Office, at E. Front St
Phone 151
Residence, 151 N. Macomb
Phone 14-M

TOLEDO
Dr. O. K. MUHME.
Office, 413 Summit St.
Phone, Adams 4911
Residence, 187 University Ave.
Phone, Walbridge 0014

INSTRUCTION TO EMPLOYEES

The nearest Company Surgeon should be called when his services are required. If he cannot be found, his Alternatis should be called.

should be called
In case of serious nigry, the injured party should be contered to the native (Incipital) and the accedent reported
immediately to the Disparcher

Acceler recognition of the Company

get the Company

Eastern Michigan Toledo Railroad

J. F. COLLINS, Receiver



Taking Effect Tuesday, September 6, 1932 At 4:00 A. M.

EASTERN STANDARD TIME

For the Information and Guidance of Employees Only and Not For the Public

A. H. CADY,
Genl. Superintendent
Oakwood Terminal,
Detroit, Mich.
Phone: Vinewood 2-0561

TIME TABLE No. 3—Effective Tuesday, September 6, 1932. Superseding Time Table No. 2, dated October 25, 1931. NORTH-BOUND Read Down

Eastern Michigan Toledo Railroad

MAIN LINE SCHEDULE

SOUTH-BOUND Read Up

		_	-		Nu -	The same of the same	-							THE COLUMN									-
	17	Daily 15	Dally 13	Daily 11	Daily 9	Daily 7	Delly 5	Daily 3	Daily 1	Miles		Miles	Dally 2	Daily 4	Dally	Dally . 8	Daily 10	Daily 12	Daily 14	Daily 16	Daily 18		
	P. M.	Р. М.	P. M.	P. M.	A. M.	A. H.	A. M.	A. 16.	A. M.			an tree	A. M.	A. 16.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.		
TOLEDO Waiting Room	10 50	8 15	5 50	3 15	11 50	9 50	7 30	6 00	4 10	0.00	TOLEDO Waiting Room	57.33	9 25	10 25	1 25	3 25	4 25	6 25	7 25	10 00	12 30	TOLEDO Waiting Room	
NOVI	11 17	8 35	5 17	3 35	12 17	10 17	7 57	6 20	4 30	5.15	*NOVI*	52.18	9 05	10 05	1 05	3 05	4 05	6.05	7 05	9 45	12 10	*NOVI*	
STATE	11 20	8 37	6 20	3 37	12 20	10 20	8 00	6 22	4 32	5.89	STATE	51.44	9 01	10 01	1 01	3 01	4 01	6 01	7 01	9 41	12 05	STATE	
KAY	11 22	8 39	6 22	3 39	12 22	10 22	8 02	6 24	4 34	7.01	KAY	50.32	8 59	9 59	12 59	2 59	3 59	5 59	6 59	9 38	12 02	KAY	
JORDAN	11 25	8 41	6 25	3 41	12 25	10 25	8 05	6 26	4 36	9.18	JORDAN	48.15	8 56	9 56	12 56	2 56	3 56	5 56	6 56	9 36	11 59	JORDAN	
BATH	11 27	8 43	6 27	3 43	12 27	10 27	8 07	6 28	4 38	10.32	BATH	47.03	8 54	9 54	12 54	2 54	3 54	5 54	6 54	9 34	11 56	BATH	
ERIE	11 28	8 44	6 28	3 44	12 28	10 28	8 08	6 29	4 39	10.67	ERIE	46 66	8 53	9 53	12 53	2 53	3 53	5 53	6 53	9 33	11 55	ERIE	
RENO	11 30	8 46	6 30	3 46	12 30	10 30	8 10	6 31	4 41	11.99	RENO	45.34	8 50	9 50	12 50	2 50	3 50	5 50	6 50	9 31	11 51	RENO	
A A	11 32	8 48	6 32	3 48	12 32	10 32	8 12	6 33	4 43	13.59	A D	43.74	8 48	9 48	12 48	2 48	3 48	5 48	6 48	9 28	11 48	D D	
HOOPER	5 11 35	8 51	6 35	3 51	12 35	10 35	8 15	6 36	4 46	16.14	HOOPER A	41.19	8 45	9 45	12 45	2 45	3 45	5 45	6 45	9 25		HOOPER	
REID	11 38	8 54	6 38	3 54	12 38	10 38	8 18	6 39	4 48	18.55	REID	38.78	8 42	9 42	12 42	2 42	3 42	5 42	6 42	9 23	11 43	REID	
ALTEN	11 41	8 56	8 48	3 36	12 40	10 40	8 20	6 41	4 50	19.74	ALTEN	37.59	8 40	9 40	12 48	2 40	3 40	5 40	13 8 40	9 21	11 43	ALTEN	
MONROE	11 45	9 01	6 45	4 01	12 45	10 45	8 25	6 45	4 52	20.88	MONROE	36.45	8 34	9 34	12 34	2 34	3 34	5 34	6 34	9 17	11 38	MONROE	
MAPLE	11 47	9 03	6 47	4 03	12 47	10-47	8 27	6 47	4 54	21.90	MAPLE	35.43	8 32	9 35	12 32	2 32	3 32	5 32	6 32	9 15	11 36	MAPLE	
PINE	11 49	9 06	6 49	4 06	12 49	10 49	8 36	6 50	4 56	23.64	PINE	33,69	8 38	9 30	12 30	2 30	3 30	5 30	6 30	9 13	11 34	PINE	
LOGAN	11 51	9 08	6 51	4 08	12 51	10 51	8 32	6 52	4 58	24.88	LOGAN	32.45	8 28	9 28	12 28	2 28	3 28	5 28	6 28	9 11	11 32	LOGAN	
STONEY	11 53	9 18	6 53	4 10	12 53	10 53	8 34	6 54	5 00	26.27	STONEY	31.06	8 26	9 26	12 26	2 26	3 26	5 26	6 26	15 9 89	11 30	STONEY	
Α	11 55	9 11	6 55	4.31	12 55	10 55	8 36	6 55	5 01	27.98	A D	29.35	8 24	9 24	12 24	2 24	3 24	5 24	62.	9 06		D D	
NEWPORT I	11 57	9 13	6 57	4 13	12 57	10 57	8 37	6 57	5 03	29.29	D NEWPORT A	28.04	B 23	9 23	12 23	2 23	3 23	5 23	6 23	9 04	11 27	NEWPORT	
COLE	11 59	9 15	6 59	4 15	12 59	10 59	8 39	g with	5 05	31.20	COLE	26.13	8 21	9 21	12 21	2 21	3 21	5 21	6 21	9 02	11 25	COLE	
ROCKWOOD	12 01	9 17	7 01	4 17	1 01	11 01	8 41	7 01	5 06	32.91	*ROCKWOOD*	24.42	8 19	9 19	12 18	2 19	3 19	5 10	6 19	9 00	11 23	*ROCKWOOD*	
MILAN	12 03	9 19	7 03	4 19	1 03	11 03	8 43	7 03	5 08	34.16	MILAN	23.19	8 15	9 15	12 15	2 15	3 15	5 15	6 15	8 55	11 19	MILAN	
TRENTON	12 10	9 26	7 10	4 26	1 10	11 10	8 50	7 10	5 13	39.89	TRENTON	17.44	8 08	9 08	12 08	2 08	3 08	5 08	6 08	8 48	11 12	TRENTON	
YALE	12 12	9 28	7 12	4 28	1 12	11 12	8 52	7 12	5 14	41.36	YALE	15.97	8 06	9 06	12 06	2 06	3 06	5 06	6 06	8 46	11 10	YALE	
																						2 42.000	
WYANDOTTE	12 17	9 33	7 17	4 33	1 17	11 17	8 57	7 17	5 18	44,77	WYANDOTTE	12.56	8 01	9 01	12 01	2 01	3 01	5 01	6 01	8 41	11 06	WYANDOTTE	
ECORSE	12 20	9 36	7 20	4 36	1 20	11 20	9' 00	7 20	5 20	45.95	ECORSE	11 38	7 58	8 58	11 58	1 58	2 58	4 58	5 58	8 38	11 03	ECORSE	
OAKWOOD	12 28	9 44	7 28	4.44	1 28	11 28	9 08	7 28	5 25	51.13	OAKWOOD	6.20	7 50	8 50	11 50	1 50	2 50	4 50	5 50	8 30	10 55	OAKWOOD	
DETROIT	12 55	10 15	7 55	5 15	1 55	11 55	9 35	8 00	6 00	57.33	DETROIT	0.00	7 20	8 20	11 20	1 20	2 20	4 20	5 20	8 00	10 30	DETROIT	
	A. M.	P. M.	P. M.	P. M.	P. M.	A. H.	A. M.	A. M.	A. M.				A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	DETROIT	
	17	15	13	11	9	7	5	3	1	Miles		Miles	2	4	6	8	10	12	14	16	10		
	Daily	Darly	Daily	Daily	Daily	Doily	Dally	Daily	Daily	Þ			Daily	Daily	Daily	Daily	Daily	Dolly	Daily	Daily	18 Daily		

coration Day, July Fourth, Labor Day, Tha

anksgiving, Christmas.

READ CAREFULLY INSTRUCTIONS PRINTED ON BACK OF SCHEDULE.

NOTE THAT

Regular scheduled meeting points are heavy face type and underscored.

The number or numbers of train or trains to be met are shown in small type above the scheduled meeting time.

The Company reserves the right to vary herefrom as circumstances may

All trains will make local stops on signal.

Location of STANDARD CLOCKS.

Dispatcher's Office. Oakwood Terminal.

YARD LIMITS.

The limits of established yards will be designated by yard limits signs.

All trains must approach and pass through the limits of established yards under full control. This will not relieve trains using the main track within yard limits from protecting themselves as per rule.

An inferior train must at all times clear or protect against a superior

Novi Yard Limit extends from Toledo to a point 1000 feet North of the Novi double track

Rouge Yard Limit extends from a point 300 feet North of North Switch point at River Rouge to a point 1000 feet North of Pepper Road (Detroit City Limits).

Monroe Yard Limit extends from a point 500 feet North of North switch point at Maple to first pole South of Alten "Y."

RAILROAD CROSSINGS.

RAILROAD CROSSINGS.

All cars or trains shall be brought to a full stop not less than fifty feet (except that when crossing is protected by derails or signals, or by both, stop is to be made ten feet distant from the derail or signal) before crossing the tracks of any railroad at grade, and will proceed only after the conductor las gone ahead (carrying with him a red flag by day and a red light by night to be used in emergency to stop trains) to the center of the crossing and after having ascertained that no trains are approaching and about to pass over the crossing will give the motorman the "Come Ahead" Signal. Where there is more than one track, the conductor must reach the center of the last track before giving the "Come Ahead" Signal. This rule strictly prohibits the motorman from taking a "Come Ahead" Signal from anyone else at these crossings unless authority has been conferred upon another employe by the Superintendent.

Before starting his car, the motorman will look back to see that no passengers are getting on or off, and in no case proceed even after the conductor's signal, until after he has also examined the crossing and satisfied himself, so far as he is able to do so from his position in the motorman's vestibule, that cars or trains are not approaching on the railroad about to be crossed. Motorman will start car or train over the crossing with sufficient headway to drift clear of same in case the power should fail, but will not gather speed thereafter until he receives and acknowledges the "Go Ahead" Signal from the conductor. Conductors handling derails or flagging crossings may leave their car or train from the front platform, but must back their car or train at the rear platform. Where there is more than one conductor on a train, the conductor on the rear car will handle the derails and flag crossings.

Special instructions will be issued for go locking switch and signal systems or other ejudgment of the Michigan Railroad Commis cars and trains to pass over such crossings as above provided for.

LOCATION OF RAILROAD CROSSINGS AND HOW PROTECTED.

Sibley, crossing L. S. & M. S. R. R. tracks. Protected by dwarf signal, gates and derail, operated by steam road trainmen.

One thousand feet South of Yale, crossing Solvay R. R. tracks. Protected by full interlocker, operated by steam road trainmen.

Monroe, crossing with L. S. & M. S. R. R. tracks. Protected by half interlocker, operated by conductor after patrolling crossing.

One mile South of State Switch, crossing T. T. R. R. tracks. To be patrolled by conductor, who operates derail in electric track.

Novi Switch crossing M. C. R. R. tracks. To be patrolled by conductor who operates derail in electric track.

LOCATION OF DRAW BRIDGE. River Rouge.

All cars must come to a full stop before passing the semaphores or op" signs which protect draw-bridges.

GENERAL INSTRUCTIONS.

For movement not provided for in the time table, train orders will be issued by Dispatcher on duty. They must not contain information or instructions that are not essential to such movements. They must be brief and clear, in the prescribed forms when applicable, and without erasure, alteration or interlineation.

Conductors and motormen are forbidden to occupy the main track with-out a copy of the current time table in their possession, and at the time of change in time tables, train dispatcher must know that each conductor and motorman has a copy of the new issue before allowing them to occupy the

If, for any reason, a train is unable to proceed on its time table rights, and the crew are unable to get into communication with Dispatcher over Company telephone, they must make every reasonable effort to get the Dispatcher by long distance over the nearest telephone.

SPEED ORDINANCES.

Wyandotte:

While crossing all public highways cars must not exceed a speed of Fifteen (15) miles per hour.

Cars must not exceed Fifteen (15) miles per hour within Village limits of Monroe Erie:

Cars must not exceed Fifteen (15) miles per hour within village limits of Erie.

Lincoln Park

Cars must not exceed Fifteen (15) miles per hour over all public road

H. D. SANDERSON, Mgr. for Receiver, 229 S. Mechanic St., Jackson, Mich. G. W. QUACKENBUSH, Traffic Mgr. 229 S. Mechanic St., Jackson, Mich. A. H. CADY, Gen. Supt., Oakwood Terminal, Detroit, Mich.

NORTH-BOUND Read Down.

Company Physicians: DR. R. P. REYNOLDS

"Safety First"

"Safety First"

Eastern Michigan Toledo R. R.

TIME TABLE No. 1

MAIN LINE SCHEDULE.

In effect 4:00 A.M., Monday, July 20, 1931 EASTERN STANDARD TIME

SOUTH-BOUND Read Up.

	19	17	15	13	11	9	7	5	3	1	Miles		Miles	2	4	6	8	10	12	14	16	18	20	
												Toledo						ĺ						
	9.30	8.00	5.30			11.50		8.55	7.50	6.20	,00	Waiting Room			10 25				4.25		7.25		1 I i	
	9.57	8.27	5.57	3.27	1.57	12.17	10.17	9.19	8.17	6.47	3.60	A 3.60 Novi	D 53.73	9.05	10 05	1.05	2.01	3 05	4.05	5.05	7.05	9.05	11.05	
	9.59	8 29	5 59	3.29	2 00	12.19		9.21	8.19	6.49	5.15	0,74	A 52.18		10.02	1	2.00	3.02			7.02		11.02	
	10.00	8.30	6.00	3.30	2.01	12.20	10.20	9.22	8.20	6.50	5.89	State 1.12	51.44	9.01	10.01	1.01	1.59	3.01	4.01	5 01	7.01	9.01	11.01	
	10.02	8.32	6.02	3.32	2.02	12.22	10.22	9.24	8.22	6.52	7.01	Kay 2.17	50 32	8.59		12.59	1.57	2.59	3.59	4.59	6.59		10.59	
	10.05	8.35	6.05	3.35	2.05	12.25	10.25	9,26	8.25	6.55	9.18	Jordan 1 14	48.15	8.56	9.56	12.56	1.56	2.56	3.56	4.56	6.56	8.56	10.56	
	10.07	8.37	6.07	3.37	2.07	12.27	10.27	9.28	8.27	6.57	10.32	Bath 0.35	47.01	8.54	9.54	12.54	1.54	2.54	3.54	4.54	6.54	1	10.54	
	10.08	8.38	6.08	3.38	2.08	12.28	₩.28	9.29	8.28	6.58	10.67	Erie	46.66	8.53	9.53	12.53	1.53	2.53	3.53	4.53	6.53	8.53	10.53	
	10.10	8.40	6.10	3.40	2.10	12.30	10.30	9.30	8.30	7.00	11.99	1.32 Reno	45.34	8.50	9.50	12.50	1.50	2.50	3.50	4.50	6.50	8,50	10.50	
	10.11	8.41	6.11	3.41	2.11	12.31	10.31	*9.31	8.31	7.01	13.08	Boston	44.25	8.49	9.49	12.49	1.49	2.49	3.49	4.49	6.49	8.49	10.49	
	10.12	8.42	6.12	3.42	2.12	12.32	10.32	9.32	8.32	7 02	13.59	0.51 A 2-55 I Hooper	43.74	8.48	9.48	12.48	1.48	2.48	3.48	4.48	6.48	8.48	10.48	
	10.15	8.45	6.15	3.45	2.15	12.35	10.35	9.35	8 35	7.05	16.14	D A	41.19	8.45	9.45	12.45	1.45	2 45	3.45	4.45	6.45	8.45	10.45	
	10.18	8.48	6.18	3.48	2.18	12.38	10 38	9.38	8.38	7.08	18.55	Reid .	38.78	8.42	9.42	12.42	1.42	2.42	3.42	4.42	6.42	8.42	10.42	
	10.20	8.50	6.20	3.50	2.20	12.40	10.40	9.40	8.40	7 10	19.74	Alten	37.59	8.40	9.40	12.40	1.40	2.40	3.40	4.40	6.40	8.40	10.40	
	10.25	8.55	6.25	3.55	2.25	12.45	10.45	9.45	8.45	7.15	20.88	1 14 Monros	36.45	8.34	9.34	12.34	1.34	2.34	3.34	4.34	6.34	8.34	10.34	
L	10.27	8.57	6.27	3.57	2.27	12.47	10.47	9.47	8.47	7.17	21.90	1.02 Maple	35.43	8.32	9.32	12.32	1.32	2.32	3.32	4.32	6.32	8.32	10.32	
	10.30	9.00	6 30	4.00	2.30	12.49	10.49	9.50	8.49	7.19	23.64	1.74 Pine	83 69	8.30	9.30	12.30	1.30	2.30	3.30	4.30	6.30	8.30	10.30	
	10.32	9.02	6.32	4.02	2.32	12.51	10.51	9.52	8.51	7.21	24.88	Logan	32.45	8.28	9.28	12.28	1.28	2.28	3,28	4.28	6.28	8.28	10.28	
	10.34	9.04	6.34	4.04	2.34	12.53	10.53	9.54	8.53	7.23	26.27	1.39 Stony	31,06	8.26	9.26	12.26	1.26	2.26	3.26	4.26	6.26	8.26	10.26	
	10.35	9 05	6.35	4.05	2.35	12.55	10.55	9.55	8.55	7.25	27.98	A 1.71 1.31 I Newport	29.35	8.24	9.24	12.24	1.24	2.24	3.24	4.24	6.24	8.24	10.24	
	10.37	9.07	6.37	4.07	2.37	12.57	10.57	9.57	8.57	7.27	29.29	D A	28.04	8.23	9.23	12.23	1.23	2.23	3.23	4.23	6.23	8.23	10.23	
	10.39	9.09	6.39	4.09	2.39	12.59	10.59	9.59	8.59	7.29	31.20	Cole	26.13	8.21	9.21	12.21	1.21	2.21	3.21	4.21	6.21	8 21	10.21	
	10.41	9.11	6.41	4.11	2.41	1.01	11.01	10.01	9.01	7.31	32.91	Rockwood	24.42	8.19	9.19	12.19	1.19	2 19	3.19	4.19	6.19	8.19	10.19	
	10.43	9.13	6.43	4.13	2.43		11.03	10.03	9.03	7.33	34.14	1.23 Milan	23.19	8.15	9.15	12.15	1.15	2.15	3.15	4.15	6.15	8.15	10.15	
1	10.50	9,20	6.50	4.20	2.50	1 10	11.10	10.10	9.10	7.40	39.89	5.75 Trenton	17.44	8.08	9.08	12.08	1.08	2.08	3.08	4.08	6.08	8. 08	10.08	
1 '	10.52	9.22	6,52	4.22	2.52		11.12		9.12	7.42	41.36	1.47 Yale	15.97	8.06	9.06	12.06	1.06	2.06	3.06	4.06	6.06	8.06	10.06	
	10.55	9 25	6.55	4.25	2.55	1 15	11.15	10.15	9.15	7.45	43.93	2.57 Glenwood	13.40	8.03	9.03	12.03	1.03	2.03	3.03	4.03	6.03	8.03	10.03	
1	10.57	9.27	6.57	4.27	2.57		11.17		9.17	7.47	44.77	.84 Wyandotte	12.56	8.01	9.01	12.01	1.01	2.01	3.01	4.01	6.01	8.01	10.01	
				4.30	3.00		11.20		9.20	7.50	45.95	1.18 Ecorso	11.38	7.58	8.58	11.58	12.58	1.58	2.58	3.58	5.58	7.58	9.58	
-	11.00	9.30	7.00	4.38	3.08		11.28		9.28		51.13	0akwood	6.20	7.50	8.50	11.50	12.50	1.50	2.50.	3.50	5.50	7.50	9.50	
		10.05	7.30		3.30			11.05	9.55	8.20	57.33	Detroit W. R.	0.00	7.20	8.20	11.20	12.20	1.20	2.20	3.30	5.20	7.30	9.20	
	19	17	15	13	11	9	7	5	3	1	Miles		Miles	2	4	6	- 8	10	12	14	16	18	20	

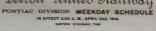
READ CAREFULLY INSTRUCTIONS PRINTED ON BACK OF SCHEDULE § All Trains Operate Daily.

* Register Station.





Detroit United Railway





0 13	14	16 (1	29	33 24	26	28 :	180 32	2 34	34	38	40	42	44	48	48	80 6	12 1	54	50 8	8 (100	12 6	4 0	10 0	88	70	72	74	74	78	00	D 6:	2 8	4 84	04	91	0 0	12 (4 (14	98	100	102	104	104	100	0 110	11:	2 114	8 114	118	120	122	124	126	128	30 11	12 18	4 13	1 130	140	142	44 14	4 145	190	162 1	84 (1	84 184	100	102 1	100	0 10
	5 00			8.4	- 1								-21		1						- 1		- 1		- 1		- 1					- 1		- 1			- 1								į.	1						1			- 1		- 1							i i								
	0.10			6.4					1 44		7.41	7.38	7.30	1.44		150 0		.30		14 0	50 S.	44 10	.60 20.	10 10	0.90	0.86 5	11.01	11.08	21.96	0 11.00	0 11.60	10 22.4	65 118.	10 15.8	6 12 6	110	06 1.	30 1	20 1	50 :	1 66	3 30	2.86	3,40	3 00	3 34	3.30	9.50	4 00	4 20	6.36	4 04	5.05	5.90	5 20	5.00 4	1.96 6	99 9.1	6.0	7 00	7.10	7.30	0.0	0.14	0.30	8.00 9.	.00 9.	.10 9.30				
	0.10			8.0	0	6.10	1.17		8.68		7.00	T 15	7,38	T,40	0.00	.10 8	30 1	48 1	0.65	18 0.	35 0	40 10.	08 10.	18 10	38	9.40 1	11.69	11.10	11.30	8 32.4	0 12.0	10 10.1	10 12.	12.4	0 10		10 2	22 1	48 2	01	2 10	3.31	1 44	3.01	3.16			4 00		4 31	6 60	5.61	5 to	5 31	£ 44	8 01 - 6	1.16 0.	31 6 1	4 0 0	7 11	T 22	7.41	81 8.1	1 8.31	8.41	8.32 8.	.11 9.	.21 0.43				
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NOTE THAT

Regular scheduled meeting and passing points are heavy face type and

The number or numbers of train or trains to be met or passed are shown in small type above the scheduled meeting or passing time. The letter "p" appearing after train number indicates that train is to pass or be passed. The Company reserves the right to vary herefrom as circumstances may

SPECIAL INSTRUCTIONS ALL DIVISIONS AND BRANCHES BE SURE YOU ARE RIGHT THEN GO AHEAD

Safety to trains is of the first importance.

Safety to trains so the first importance.

Speed must always be sar-friced for safety.

In case of doubt adopt the safe course.

It is far better to prevent an accident than to explain how and why it

occurred.

The humblest employee having knowledge of danger to a train is first in authority, as well as responsibility, until the danger has passed, or he has communicated his knowledge to his superior.

It is not to be a superior of the habitual use of intoxicating liquors by employees is strictly forbidden and will be sufficient cause for dismissal from the service

strictly forbidden and will be sufficient cause for dismissal from the service of the Company Railroad Laws of Michigan contain the following: "No person abail be employed as Engineer (Motorman), Train Dispatcher, Conductor or other servant upon any railroad in any of its operating departments, who uses intoxicating drinks as a beverage." A fine of \$800,000 may be imposed to the conductor of the law.

All employees while on duty must have a copy of the Book of Rules.

of Rules.

Kules.

The following signs and abbreviations may be used:
& M." For Conductor and Motorman.

K." As provided in Book of Rules.
in." For Minutes.

**t." For Freight

6." For Number.

"C. & M."
"O. K."
"Min."
"No."
"Eng."
"Sec."
"Opr."
"Orders" For Engine. For Section.

For Operator

To clear the dispatching line for train orders, or for C. & M. to call for train orders. For Arrive.

The usual abbreviations for the names of months

Location of STANDARD CLOCKS

1. Interurban Waiting Room, Detroit. 3. Dispatcher's Office, Pontiac.

YARD LIMITS

The limits of established yards will be designated by yard limits signs All trains or established yards will be designated by yard limits signs.

All trains must approach and pass through the limits of established yards
under full control. This will not relieve trains using the main track within
yard limits from protecting themselves as per rule. An inferior train must at all times clear or protect against a superior

Royal Oak Yard Limit extends from a point 1,000 feet South of South point of Royal Oak "Y" to a point 1,000 feet North of North point (on Pontiac Div.) of the "Y."

Birmingham Yard Limit extends from a point 200 feet South of South at of Finn Spur to a point 1,000 feet North of North wall line of Birming-

Pontiac Yard Limit extends South to the Town Line Road

RAILROAD CROSSINGS

All cars or trains shall be brought to a full stop not less than fifty feet (except that when crossing is protected by derails or signals, or by both, stop is to be made ten feet distant from the derail or signal) before crossing the tracks of any railroad at grade, and will proceed only after the conductor has gone ahead (carrying with him a red flag by day and a red light by night to be used in emergency to stop trains) to the center of the crossing and after having assertained that no trains are approaching and about to pass over the crossing, will give the motorman the "Come Ahead" Signal. Where track before giving the "Come Ahead" Signal row any one clea at these crossings unless authority has been conferred upon another employee by the Superintendent. All cars or trains shall be brought to a full stop not less than fifty feet

Before starting his car, the motorman will look back to see that no passengers are getting on or off, and in or case proceed even after the conductor's signal, until after he has also examined the crossing and satisfied himself, so far as he is able to do so from his position in the motorman's lumselt, so lar as he is able to do so from his position in the motorman's vestibule, that cars or trains are not approaching on the railroad about to be crossed. Motorman will start-car or train over the crossing with sufficient gratery of the control of the c

Special instructions will be issued for grade crossings protected by inter-Special instructions will be issued for grade crossings protected by inter-locking switch and signal systems or other device or regulation which in-tiguate the first part of the first property of the property of the cars and trains to pass over such crossings without being brought to a stop as above provided for.

LOCATION OF RAILROAD CROSSINGS AND HOW PROTECTED

Highland Park, two hundred feet North of Woodward Car House, crossing D. T. R. R. track. Protected by half interlocker operated by steam road trainmen. Stop and, if semaphore signals are clear, proceed over crossing at not more than four (4) miles per hour

One and three-quarter miles South of Pontiac, crossing D. G. H. & M. R. Protected by half interlocker, operated by towerman.

One mile South of Pontiac, crossing G. T. R. R. Protected by half interlocker, operated by towerman. Pontiac, Oakland Ave. North of Clark, crossing P. O. & N. R. R. To

LOCATION OF TRAIN OPDER SEMAPHORE

be patrolled by conductor

Royal Oak

GENERAL INSTRUCTIONS

Due notice of the issue of a new time table will be posted on the bulletin

boar is a successful to the control of the control

issue of the time table before it goes into effect, and shall require a receipt from them, also all copies of previous issue, which must be destroyed, except that where a different time-table is used on week days, Saturdays or Sundays, they will not be destroyed, but one must be turned in when the other is re-

No trainman will, under any circumstances, go on duty without a copy of the current time table in his possession.

Where but one time is given for a train at a station, it is the leaving time. The time as shown on time table for a siding applies to the switch where an inferior train would enter the siding to clear the train for which such time is shown.

is shown.

Time tables are provided for the guidance of employees only and are not intended for the use of the public.

Trains must approach all switches cautiously; motormen must be sure that they are safe before passing them, and must exercise extreme caution whenever trains occupy sidings, especially passenger risms taking on or letting off passengers. In such cases, trains must be under complete court. When approaching an opposing train on double track, headlight must be

dimmed. (Also see Rule No. 101 in Rule Book) A running or flying switch is forbidden.

REGULAR TRAINS in either direction have no superior rights over regular trains in an opposite direction, but will meet them as per time table, unless otherwise ordered by the Dispatcher.

Special orders directing movements varying from, or in addition to, the time table, will be issued by the Train Dispatcher on duty. EXTRA TRAINS have no rights except those conferred upon them by

All extra trains must report to the Dispatcher at junction p

All extra trains must report to the Dispatcher at junction points. Extras may pass and run ahead of extras. The crew of an extra so passed must report the fact to the Dispatcher from that point.

Under no circumstances may extra trains run between the sections of regular trains going in the same direction.

When a work extra is clearing regular trains, and also at intervals of not to exceed one hour, crew must report to the Dispatcher.

A work train when met or overtaken by an extra, must allow it to pass

A work train when met or overtaken by an extra, must allow it to pass without numecasary determined as signals are displayed. RED in a signal to stop, and requires the motorman and conductor of any train or any section of a train to report to the Dispatcher for train orders. They must not proceed until they have received such orders from the Train Dispatcher, or the signal lass been changed to "Proceed."

At stations not provided with train order signals, a RED flag by day and a RED light by night will be displayed for the purpose of notifying the crews of passing cars or trains to stop and call for train orders. They must not proceed until they have received such orders from the Train Dispatcher, or the signal has been removed.

Except on double track, it shall be the duty of all crews on any train when meeting another train to slow down sufficiently to allow crew to distin-

Guisa car and train numbers.

Only one person at a time (the Dispatcher on duty) will be permitted to move trains by train order within the same limits.

For movement not provided for in the time table, train orders will be issued by Dispatcher on duty. They must not contain information or instructions that are not essential to such movements. They must be brief and clear, in the prescribed forms when applicable, and without erasure, alterative or the prescribed forms when applicable, and without erasure, alterative or the prescribed forms when applicable, and without erasure, alterative or the prescribed forms when applicable is not such as the prescribed forms when applicable, and without erasure, alterative or the prescribed forms when applicable is not such as the prescribed forms wh

tion or interlineation Conductors and motormen are forbidden to occupy the main track without a copy of the current time table in their possession, and at the time of change in time tables, train dispatcher must know that each conductor and notorman has a copy of the new issue before allowing them to occupy the

When a train outbound from Detroit is delayed at any point before reach

ing the terminial, on account of blockade, fire, derailment, etc., crew must im mediately telephone to Woodward Car House (Hemlock 694), or Antoine Station (Main 2838, 4914 or 4915), stating the conditions and how long, so far as known, the train will be delayed, which information will then be communicated by the man in charge at Woodward Car House or Antoine Station

If, for any reason, a train is unable to proceed on its time table rights, and the crew are unable to get into communication with Dispatcher over Company telephone, they must make every reasonable effort to get the Dispatcher by long distance over the nearest telephone.

For the general information of the public, trains running in sections will display green signals on front of train between Detroit Interurban Waiting Room and the terminal

WHISTLE SIGNALS

Whistle signals must always be given at places and under the circumstances indicated below. Whistle must not be used within the limits of a city, town or village (except to avoid accident). When the blowing of the whistle is forbidden by law, ordinance or rule, the sounding of the gong must

	Sound	Indication
(a († (c (c)	i) One Short	
(1) Two Long	
(<	One Long and Three Short.	
(4	i) Four Long	
(1	e) Five Long	
(1	f) Three Long	When running, train parted; to be re- peated until answered by the signal
		prescribed by Rule 92 (d).
(6	g) Two Short	Answer to any signal not otherwise pro- vided for.
(1	Three Short	When train is standing, is a signal to con-
	,	ductor that motorman wishes to back

(j) One Long and Two Short... To call attention of all trains met or passed, section-men, bridge-men and others interested, to signals displayed for a following section.

(k) One Short and One Long... Answer to signal of train displaying aignals for following section.

(l) Two Long and Two Short... Approaching public road crossing and at all road crossing whistle signs.

(m) One Long ... Approaching stations and dangerous or obstructed curves or severe breaks in

grades.

Note: On the double track between the Detroit Interurban Waiting

Room and Pontiac, signal to call attention to signals displayed for a following section (j) will be given only when passing trains going in the same

SPEND ORDINANCES

Birmingham:

Cars shall not be operated at a speed exceeding twelve (12) miles per hour in said village.

Cars shall not be operated at a greater speed than twelve (12) miles per hour within limits of said city.

HARRY BULLEN General Superintendent.

train, and must be answered (98f) by conductor before train is backed.



EASTERN STANDARD TIME IN EFFECT SEPTEMBER 6, 1923

RAPID RAILWAY SYSTEM SUBJECT TO CHANGE WITHOUT NOTICE

LIGHT FIGURES A.M.

DARK FIGURES P.M.



STATIONS	LIMITED CARS as	NORTH BOUND DETROIT TO PORT HUMON	t t t t LOGALS
Detroit Lv Ms. Clemens New Baltimore Anchorville Fair Haven	7 15 8 15 9 15 10 15 1: 15 12 15 1 15 2 15 3 15 4 15 5 15 6 6 15 7 15 11 1 8 20 9 30 10 20 11 20 11 20 1 20 1 20 1 20 1 2	0	9 3 15 3 40 4 15 4 40 5 15 5 40 6 15 6 40 7 40 8 40 9 40 11 15 6 4 34 4 5 5 5 6 4 6 5 7 34 7 5 5 9 5 10 9 11 12 22 2 2 2 3 5 3 5 5 3 5 5 6 5 6 3 6 5 7 3 4 7 5 5 9 5 1 9 5 1 1 1 1 4 1 1 2 2 2 3 5 9 5 1 1 1 1 4 1 1 2 2 2 3 5 9 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Pearl Beach Algonae Boberts Landing Marine City St Clair	3 % 10 % 11 % 13 % 1 % 3 % 3 % 1 % 5 % 5 % 5 % 7 % 8 % 8 % 1 %	6 48 7 48 9 46 11 48 1 48 3 48 4 40 5 00 5 00 5 00 5 00 5 00 5 00 5	\$ \$ 60
Maryaville Ar Pt. Huron Ar STATIONS	9 25 10 25 11 25 12 25 1 25 2 25 3 25 4 25 5 25 6 52 7 25 8 25 9 25 1 2 9 25 10 52 11 52 12 52 1 52 2 52 3 3 52 4 52 5 52 6 52 7 52 8 52 9 52 1 2 9 9 52 10 52 11 52 12 52 1 52 2 52 3 52 4 52 5 52 6 52 7 52 8 52 9 52 1 2	4 620 720 820 920 1120 120 3 20 3 20 422 520	1 1 1 1 2 2 2 2 2 2
Pa Huron Lv. Maryaville St. Clair Marine City Roberts Landing	4 55 6 627 7 27 8 27 9 27 10 27 11 27 12 21 27 12 72 3 72 4 27 5 72 16 77 1 5 13 6 6 5 7 45 8 45 9 45 10 45 11 45 12 45 14 5 145 6 145 7 45 8 45 5 45 6 45 7 45 8 6 5 5 5 6 5 5 7 5 9 8 59 9 59 10 59 11 59 12 59 1 59 2 59 3 559 4 559 5 50 6 59 7 59 8 10 10 10 11 16 12 16 1 16 2 16 3 16 4 16 5 16 6 16 7 16 8 16 9 16 10 16 11 16 12 16 1 16 2 16 3 16 4 16 5 16 6 16 7 16 8	7 10 27 5 15 5 57 6 57 8 57 5 10 5 10 5 10 5 10 5 10 5 10 5 10 5	10 57 12 57 2 3 5 3 20 3 57 4 57 7 5 5 1 20 3 5 1 4 5 5 6 7 5 6 7 1 5 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Algonac Pair Beach Fair Haven Anchorville New Baltimore A Clemens	6 005 1 7 40 8 40 3 40 10 40 11 40 17 40 1 40 7 40 3 40 4 40 5 40 6 40 7 40 8 80 8 80 8 1 7 7 8 8 85 3 94 5 10 5 11 45 17 45 1 45 1 45 1 45 1 45 1 45	0 1 40	5 12 45 2 45 4 4 45 5 45 6 45 8 45 10 38

In Port Huren the north bound Limiteds will stop at street crossings only north of Central Ave, to let passengers off, and when south bound only to take passengers aboard, except at Waiting Room, where they will stop going north and south.

* Mondays only

* Down to take passengers aboard, except at Waiting Room, where they will stop going north and south.

* Mondays only

* Starts from Car House

† Daily Except Saturdays, Sundays and Holidays

* Down to run North of Canfield Sundays and Holidays.

				SHOF	RE	LIN	E D	IVIS	101	đ							
STATIONS			NORTH	BOUND		W	VAYBU	JRN	TO	MT.	CLEM	ENS		LOC	ALS		
Wayburn LoopLv. Weir Lane WinderLakeside Ms. Clemens H. SAr.	6 08	6 45 7 08 7 25 7 45 8 00	7 45 8 45 8 08 9 08 8 25 9 25 8 45 9 45 9 00 10 00	9 45 10 45 10 08 11 08 10 25 11 25 10 45 11 45 11 00 12 00	11 45 12 08 12 25 12 45 1 00	12 45 1 08 1 25 1 45 2 00	1 45 2 08 2 25 2 45 3 00	2 45 3 08 3 25 3 45 4 00	3 45 4 08 4 25 4 45 5 00	4 45 5 08 5 25 5 45 6 00	5 45 6 08 6 25 7 00	6 45 7 08 7 25 7 45 8 00	7 45 8 08 8 25 8 45 9 00	5 45 9 08 9 25 9 45 10 00	9 45 10 08 10 25 10 45 11 00	10 4 11 0 11 2 11 4 11 0	5 12 00 8 12 17 5 12 30 5 12 45 0 1 00
STATIONS			SOUTH	BOUND			MT.	CLEM	ENS	TO	WAY	BURR	ē.	LOC	ALS		
Ms. Clemens H. S. Lv. Lakeside Winder Weir Lane Wayburn Loop. Ar.	4 35	5 25 5 35 6 05 6 20 6 40	6 25 7 25 6 35 7 35 7 05 8 05 7 20 8 20 7 40 8 40	8 25 9 25 8 35 9 35 9 06 10 05 9 20 10 20 9 40 10 40	10 25 10 35 11 05 11 20 11 40	11 25 11 35 12 05 12 40	12 25 12 35 1 20 1 40	2535520	25 35 05 00 00 00 00 00 00 00 00 00 00 00 00	3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 25 4 35 5 20 5 40	25 35 65 66 66 66	6 25 7 25 7 20 7 40	7 25 7 35 8 20 8 40	255670	10 10	10 25 10 35 10 11 20 11 40

ADDITIONAL WAYBURN AND DEFER SERVICE

- Additional cars leave Wayburn for Winder at †4.45 a.m., †5.05 a.m. and every 5 minutes and 25 minutes after the hour to 7.25 p.m., also 10.15 p.m., 11.15 p.m.
- Additional cars leave Winder for Wayburn Loop at †5.25 a.m., †5.45 a.m. and every 25 minutes and 45 minutes after the hour to 9.45 p.m., also 10.35 p.m., 11.35 p.m., and midnight.
- † Daily except Sundays and Holidays.



WYANDOTTE AND TRENTON INTERURBAN CARS

DETROIT UNITED RAILWAY
Security Trust Co. and W. C. Dunbar, Receivers

EASTERN STANDARD TIME

IME!

REVISED JANUARY 1, 1987	WEEK DAY SCHEDULE	SUBJECT TO CHANGE WITHOUT NOTICE	LIGHT FIGURES A. M. DARK FIGURES P. M.
MIL STATIONS		TRENTON SERVICE—SOUTH BOUND	
0.0 Detroit Feterurbas Station Lv. 5 00 15 30 16 00 65 67 River Rosage (Deschore)	30 7, 00 7, 30 8, 00 9, 00 19, 30 10, 00 10, 30 11, 06 1, 10 <t< th=""><th>1.100 1.100 72 000 12 301 100 1 301 2 000 13 303 3 303 3 401 4 455 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</th><th>30 4 5 5 60 5 14 6 20 5 44 6 5 60 6 7 12 7 7 60 7 20 7 20 7 20 7 20 7 20 7 20 7</th></t<>	1.100 1.100 72 000 12 301 100 1 301 2 000 13 303 3 303 3 401 4 455 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	30 4 5 5 60 5 14 6 20 5 44 6 5 60 6 7 12 7 7 60 7 20 7 20 7 20 7 20 7 20 7 20 7
MIs. STATIONS		TRENTON SERVICE—NORTH BOUND	
0.0 TrentonLv. 4 55 5 15 5 30 5 3	85 5 55 6 15 6 36 6 55 7 15 7 35 8 35 8 35 36 36 36 36 36 36 36	9 05 9 35 10 05 10 35 11 05 11 35 12 05 12 35 1 05 1 35 2 05 2 35 3 05 3	第

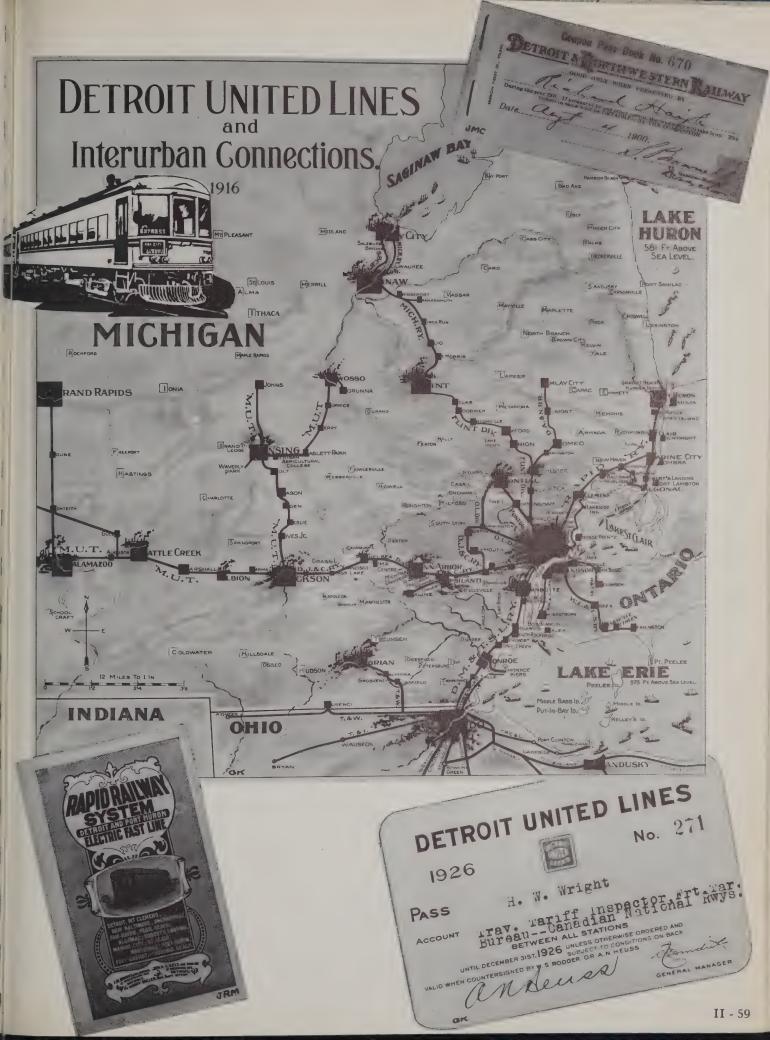
ML STATIONS

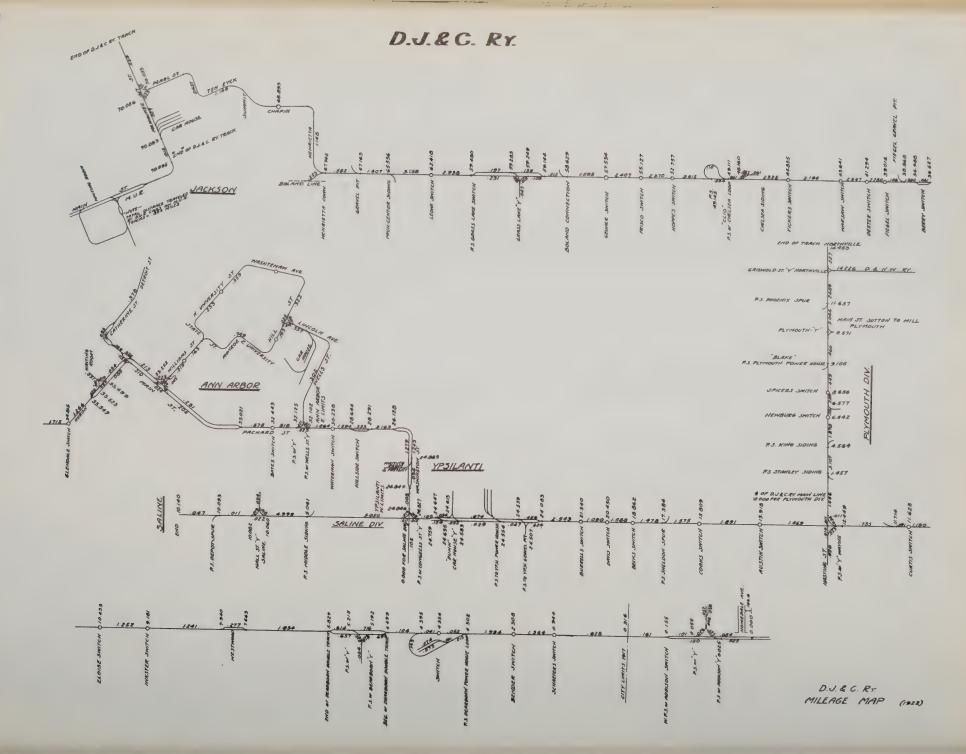
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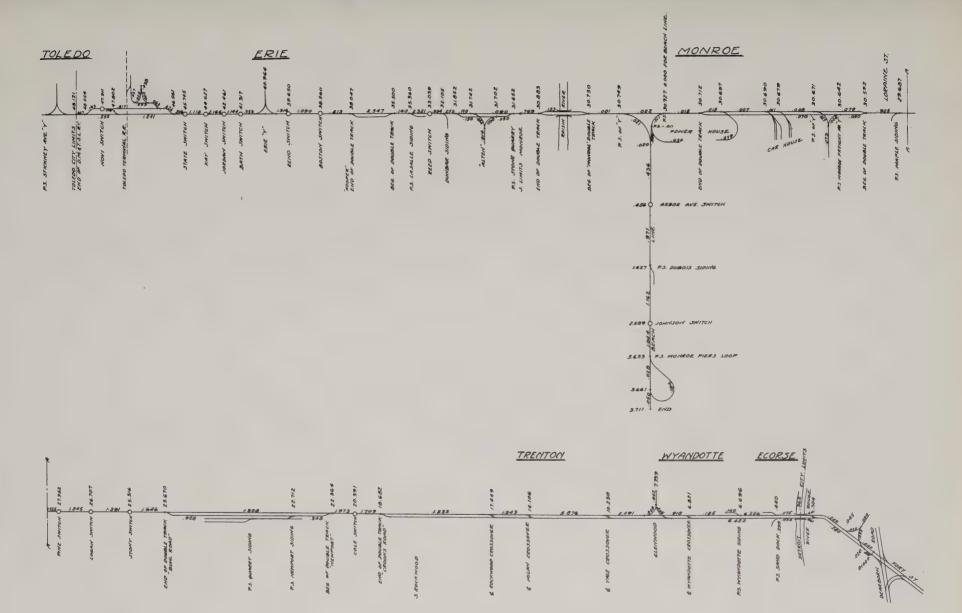
HOLIDAY

Leave Detroit for Wyandotte and Trenton at 6.00 a.m., and every half hour to 12.00 midnight.

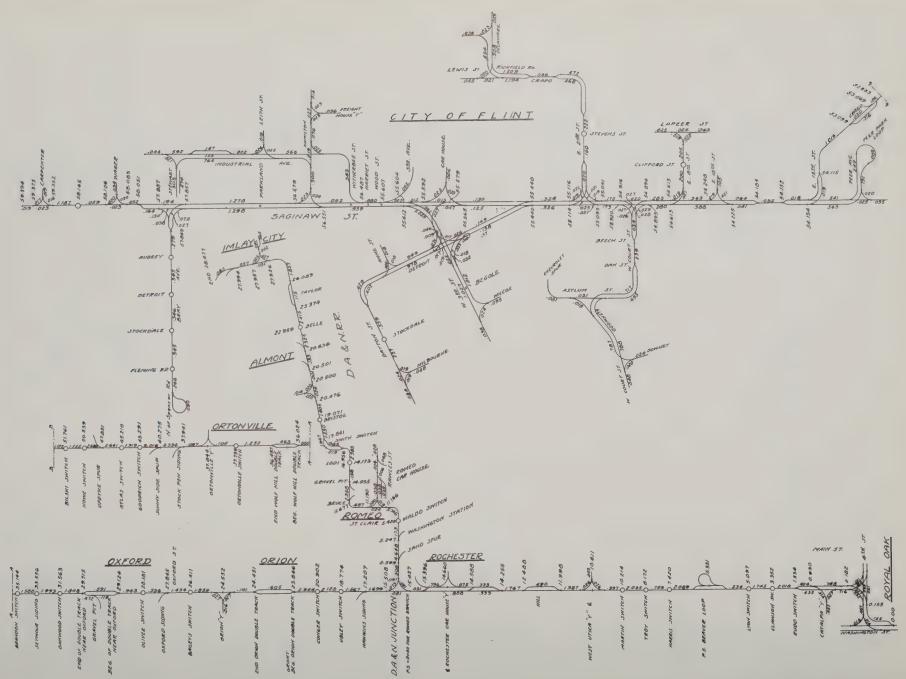
Leave Trenton for Wyandotte and Detroit at 5.35 a.m. and every half hour to 11.35 p.m.



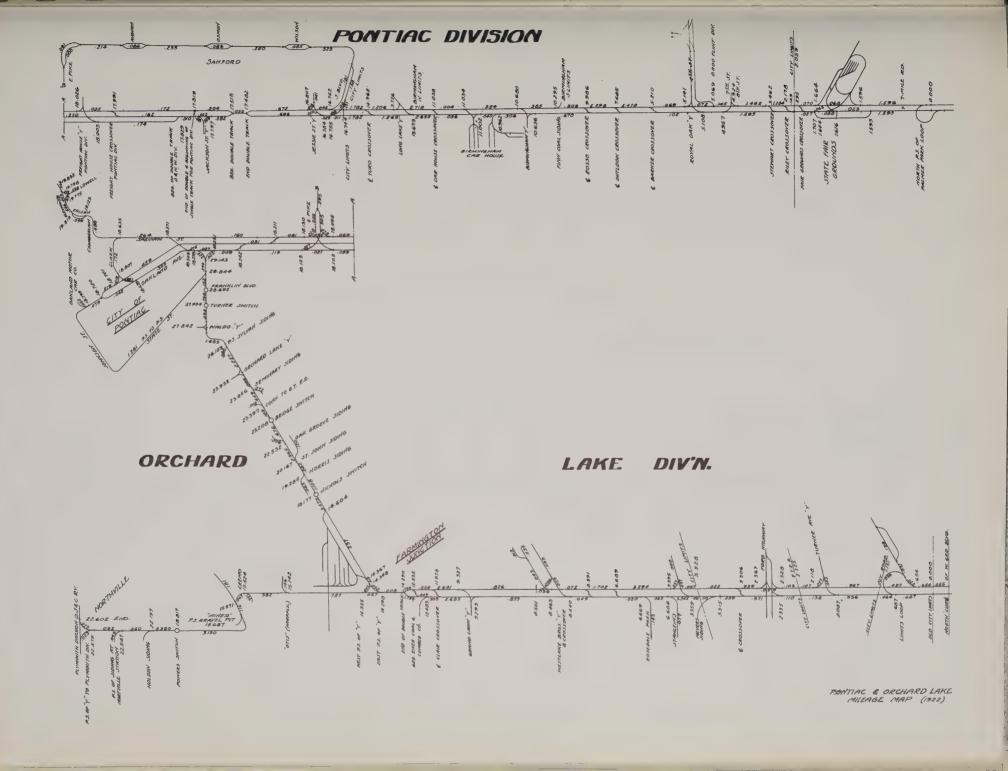


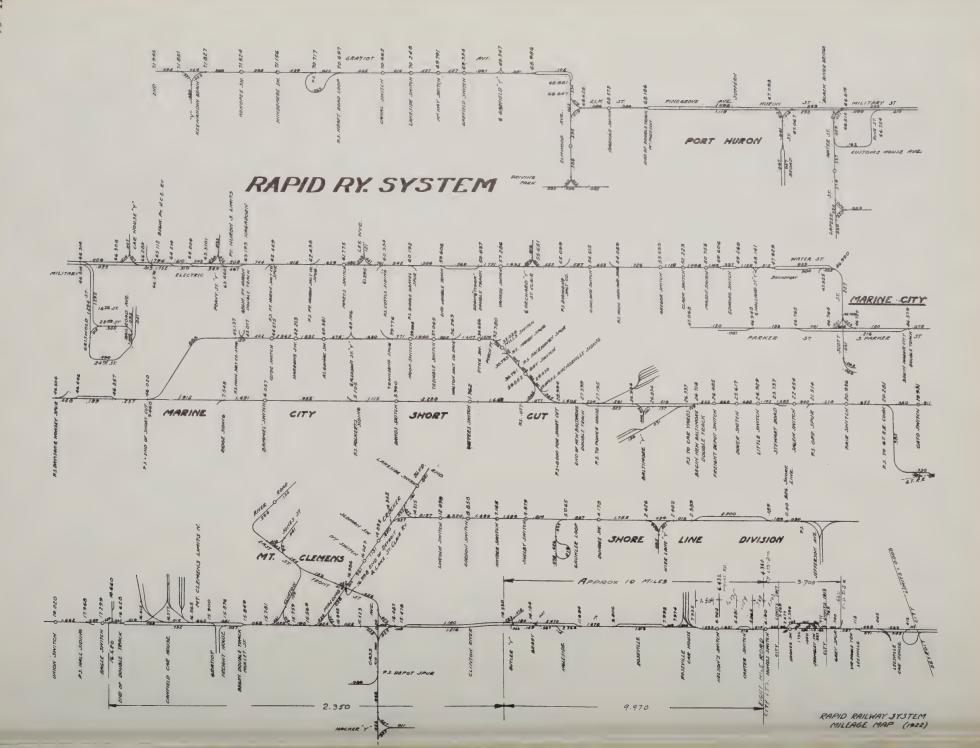


D.M. & T.S.L. RY. MILEAGE MAP. (1922)

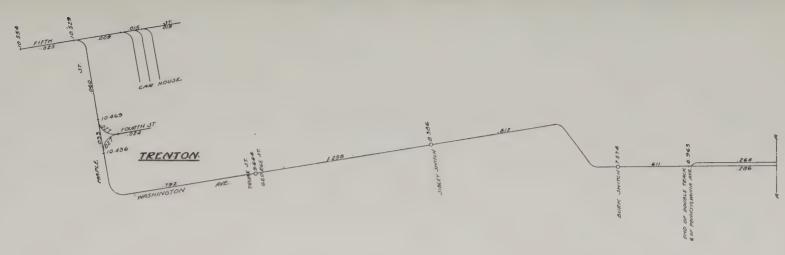


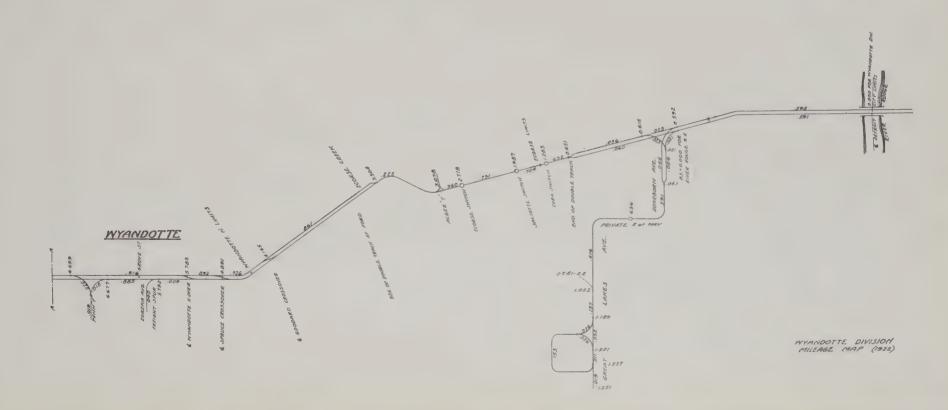
D.U.RY. & D.A. & M. R.R.
FLINT - MILEAGE MAP 1922

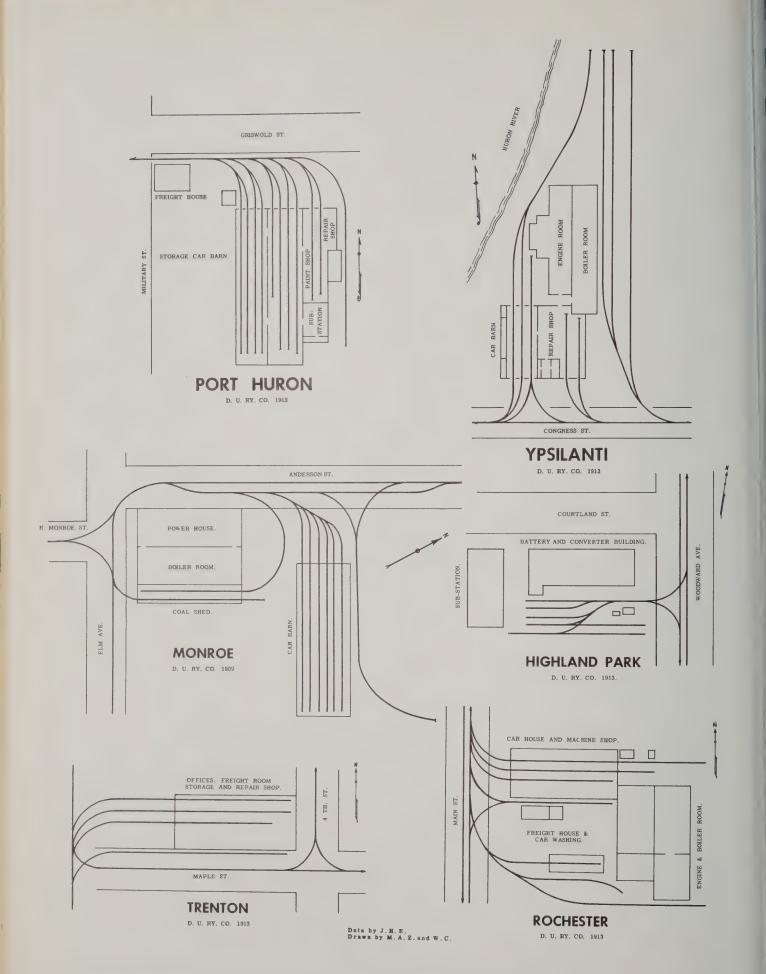


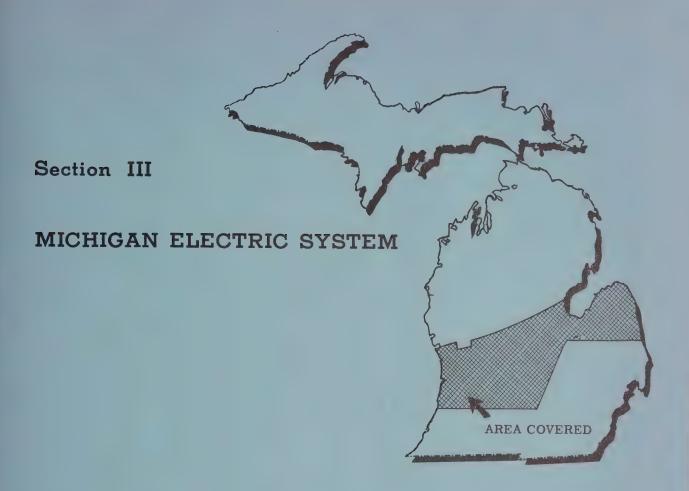


WYANDOTTE DIVN.









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MICHIGAN ELECTRIC RAILWAY LINES Interurban Lines:

The accurate story of Michigan's number two electric railway system is most difficult to unravel. From beginnings at the turn of the century, this system flowered to a peak in 1916 and then receded to an end in 1929. During that period, short as business lives go, the property never went more than a few years without some corporate change, usually involving a name change. Rather than trace all these changes in a detailed document, we have compiled a family tree diagram which is presented elsewhere. Suffice here to say that the system had its roots in the outlying areas west and north of the Detroit United system.

It was a complete, and in its day, a modern electric railway system, with street railways and interurban lines linking the city properties. It was allied to a powerful and growing electric power company, the Commonwealth system, whose descendants are in existence today.

Its earliest interurban components, like Jackson & Battle Creek Traction Company, Michigan Traction Company and Detroit Flint & Saginaw were built cheaply and had their share of side-of-the-road operation. The company's experiences with these installations led to ever higher standards as extensions were made.

BATTLE CREEK-KALAMAZOO:

The line from Battle Creek to Kalamazoo was begun in 1899 by the Michigan Traction Company, with service beginning the following year. Entry into Kalamazoo was delayed by opposition of steam railroads that had to be crossed. Solution of the problem required the construction of a costly under-and-overpass which was not completed until October, 1901. A branch line to Gull Lake ran into difficulty when a hotel whose lakefront property was to be crossed opposed the company. This problem was met by building around the property to reach the lake at another point.

In December, 1905, the Mills-Moore-Elliot syndicate took over Michigan Traction and combined it with the Jackson-Battle Creek line to form Michigan United Traction.

JACKSON-BATTLE CREEK:

Three small lines were consolidated to form the 45-mile Jackson & Battle Creek Traction Company, connecting the cities of its name. Thru service began over this route in June, 1903. It was operated by 600 v DC third rail. It was combined with the Battle Creek-Kalamazoo line to form Michigan United Traction.

LANSING - ST. JOHNS:

The 20 miles of road north from Lansing to St. Johns was contracted on April 23, 1900. Bion J. Arnold was to be the engineer, assuming part of the financial risk. The plans called for later extension of the road thru Maple Rapids, Ithaca and Alma to St. Louis, for a total length of about 60 miles. Construction was pushed along and the road was opened for service with steam locomotives about November 15, 1901, under the name

Lansing St. Johns & St. Louis Electric Railway. Work on the electrical equipment was delayed by Arnold's desire to develop for this road an entirely new approach, and even when the trolley installation was done about December 15, 1902, the motive power was still not ready.

Finally, on June 15, 1903 two trips were made, each about 3 miles long, with the first experimental machine operating from a trolley charged with 2400 v 25 cycle alternating current. The first car was a single truck flat car.

In it a high voltage AC motor was connected to an air compressor mounted on the driving axle in such a way that, when the armature of the motor was stopped, the motion of the motor field drove the air compressor, pumping up air for later use. This later use might be starting the car or operating thru a short non-electrified area. Or it might be to reverse the car and bring the motor up to speed in a new direction.

Arnold's thought was that the constant speed motor would prove a most efficient way of driving a car, and that the AC trolley would cheapen the cost of electrification, since it would eliminate most of the machinery of a DC substation.

Unfortunately, a fire on December 18, 1903 destroyed the car house, test locomotive #2 and two new cars, along with a steam locomotive. In order to meet starting date commitments, the line having been acquired by the Lansing city railway people, it was quickly fitted up as an ordinary 600 v DC road by adding feeder copper and a rotary substation.

In the meantime, Arnold had engine #3 built up from the salvage of the fire, and on the evening of August 3, 1904 the "Phoenix", as it was inevitably named, made its trial run from Lansing to Dewitt, a distance of 8 miles, running on trolley wire, charged for the night at 6000 v AC. Without actually admitting defeat, but with numerous side difficulties plaguing the tests, the project was dropped and operation of the line for revenue continued with 600 v DC trolley.

JACKSON-LANSING:

Another third rail line was built on private right-of-way following the Michigan Central (steam) Railroad line between Jackson and Lansing, seat of the State Capitol. At Lansing it connected with the Lansing & Suburban Traction Company, operating city lines and a 20-mile interurban trolley route to St. Johns. An extension was built thru East Lansing to Haslett and Pine Lake. Near the latter point the route ran across "sink holes", a marshy ground consisting of a 10 ft. thickness of peat floating on water to a depth of as much as 60 ft. In one case, a raft of timbers was built on the peat and tracks were laid on this. When a car passed over the sink hole, the track would sink several inches and then spring spongily back.

In 1910, the line, now an integral part of Michigan United, planned an extension from Haslett to Flint. It completed the plan as far as Owosso.

This extension was fitted with third-rail.

At Owosso connection was made with the diminutive Owosso & Corunna interurban for the shorthop to that neighboring town. This line was also taken into the Michigan United system and operated as a feeder to the Lansing interurban. KALAMAZOO-SOUTH HAVEN:

Along-nurtured, but never successful, project was the connecting of Kalamazoo to one of the Lake Michigan ports, or better yet, to Chicago itself, by interurban. Efforts on this plan have been the subject of a recent historical thesis by A. Rodney Lenderink, MCERA. Suffice here to say that they ultimately resulted in the completion of a steam railway between Kalamazoo and South Haven, with a branch from Toquin to Paw Paw Lake, where connection was made with a branch of the Benton Harbor-St. Joe interurban.

In 1911, Michigan United Traction leased this line, then known as the Kalamazoo Lake Shore & Chicago Railway. It was planned to electrify it as was being done with the Allegan-Gull Lake Jct. line. In the meantime a couple of old steam coaches and a second-hand "tea kettle" hauled passengers over the line.

Familiarity gained thru the lease, plus experience with the overbuilt Allegan-Grand Rapids project, cooled the plan and the lease was relinquished on its expiration in 1916. Operation of part of the road was continued by Pere Marquette R.R.

FLINT-SAGINAW-BAY CITY:

The interurban road connecting Flint to Saginaw was built under the name Detroit Flint & Saginaw Railway, later changed to Saginaw & Flint Railway. Its first accomplishment was to place a suburban line in service from Saginaw southeast to the hamlet of Frankenmuth, where there was a popular resort. The distance was about 15 miles in all.

In 1908 the route was extended from a point 9 miles out of Saginaw in a southerly direction to Flint, where connection was made with the Detroit United Railways interurban for Detroit. The extension was 24 miles in length.

In 1914 the line, now renamed Michigan Railway, was extended to Bay City and the existing trackage was modernized. The company's engineering staff was well sold by now on the low cost of both the high voltage and third rail systems. The Flint-Saginaw road, partly built on public highway, was changed from 600 to 1200 v DC, but the trolley system was retained here. The country portion of the new Saginaw-Bay City route was fitted with overrunning third rail energized at 1200 v. The existing cars were reequipped with new motors and control and some of the new MUT design steel cars were added.

This line ran trains thru over DUR into Detroit, but the 1200 v power system precluded the use of DUR cars over its tracks, so thru trains inevitably had Michigan Railway cars.

GRAND RAPIDS-KALAMAZOO, ALLEGAN-BATTLE CREEK:

Most ambitious project of this system was its western division, completed and placed in service between Grand Rapids and Kalamazoo on May 17, 1915. This 50-mile line was built to the highest standards, with private right-of-way from end to end. Its use of 2400 v DC has already been mentioned, with third rail in rural areas and catenary trolley thru intermediate towns. In Grand Rapids and in Kalamazoo, cars ran on 600 v DC trolley using a trolley pole pickup.

Very high speed was maintained, the cars being capable of 75 mph in open country. A portion of the old Detroit Toledo & Milwaukee (steam) line extending between Allegan and a point near Battle Creek, crossing the Grand Rapids-Kalamazoo line at Monteith Junction, was purchased from the New York Central and was electrified with the same system. Cars were then routed thru between Grand Rapids and Battle Creek, or between Grand Rapids and Kalamazoo, with a shuttle car running from Allegan to Monteith to meet the thru cars.

GRAND RAPIDS - HOLLAND:

In 1899 the Holland & Lake Michigan Railway opened 6 miles of traction line west from Holland to Macatawa on Lake Michigan. The next year, the line was reorganized as the Grand Rapids Holland & Lake Michigan Railway and built the line thru to Grand Rapids. In 1902 a branch was built from Holland south to Saugatuck with the intent of extending it beyond to South Haven. The main line between Grand Rapids and Holland was almost all double track. It was impressive to see the electric cars race past a Pere Marquette steam train in this area. Actually, the carrying charges of the extra investment of the doubletrack were never really supported by the amount of traffic generated and the service could have been more cheaply handled by a single track line with passing sidings.

Connection with steamships running over Lake Michigan to Chicago provided considerable seasonal interchange business. Becoming the principal connection of the Graham & Morton line, the interurban changed its name to Grand Rapids Holland & Chicago Railway on August 1, 1904. Interchange business was primarily passenger traffic, altho the line also developed freight traffic and had 28 box and flat cars, two motor cars and five combination passenger-baggage cars.

A suburban business developed between Grand Rapids, Grandville and Jenison which called for supplemental tripper service.

During a $5\frac{1}{2}$ day period in November, 1913, after the tourist season had closed, the track on the Holland-Saugatuck branch was taken up and relaid on new ties along a route close to the shore of Lake Michigan, partly to get a better route and partly to get away from branch operation by ar-

ranging a thru route. This new line was electrified with the 1200-volt system, unlike the rest of the property which used 600-volt DC trolley.

Commonwealth Power Company, who was by this time interested heavily in interurban development in western Michigan, owned the Ottawa Beach Hotel at Saugatuck and bought a 65-ft. steel ferry boat to reach it from the interurban dock.

In 1916 the Michigan Railway leased GRH&C and made it the Northwestern Division. The entry into Grand Rapids, which had been over the local street car company's tracks, was shifted to the high speed private right-of-way of the Michigan Railway line from Grand Rapids to Kalamazoo.

The operating merger did not pay off, however, and on December 31, 1923 Michigan Railway cancelled its lease and returned the property to its owners. Losses mounted and a dispute with Grandville over paving led to a petition for abandonment, granted as of November 15, 1926.

A new company, the United Suburban Railway, took over Grand Rapids-Jenison service. Four of the GRH&C Jewetts, built in 1913, were acquired by Union Traction Company of Indiana and one of its box motors went to Toledo & Western.

General Notes on the Interurban System As Operated by Michigan Railway.

The system reached its peak of extent in 1916, when the lines were consolidated for operating purposes into the Michigan Railway. The various components became divisions, as follows:

DIVISION	ROUTE
Northwestern	Grand Rapids-Macatawa
	Holland-Saugatuck
Western	Grand Rapids-Kalamazoo
	Allegan-Battle Creek
Southern	Kalamazoo-Battle Creek
	Battle Creek-Jackson
	Jackson-Grass Lake
Northern	Jackson-Lansing-Owosso
	Lansing - St. Johns
	Owosso - Corunna
Northeastern	Bay City-Saginaw-Flint
Steam	Kalamazoo-South Haven

Third-rail distribution was a notable feature of most Michigan Electric interurban routes; it probably had more of this than any property other than the New York rapid transit lines. High propulsion voltage was another characteristic, with much 1200-v DC third-rail.

The following tables are believed to show correctly the voltage and power distribution method used on various segments of the system:

Lines Operated by Third Rail

Grand Rapids-Kalamazoo
Allegan-Battle Creek (Camp Custer Jct.)
Battle Creek - Jackson
Jackson - Lansing
Haslett - Owosso

Saginaw - Bay City via east side line.

In all above routes, short sections thru certain towns were operated by overhead trolley. All other branches not listed above were operated by overhead trolley.

High Voltage Routes;

Edge of Grand Rapids to edge of Kalamazoo operated at 2400 v DC before 1916 and at 1200 v DC thereafter.

Allegan to edge of Battle Creek operated at 2400 v before 1916 and at 1200 v thereafter. Macatawa Jct. to Saugatuck operated at 1200 v after 1914.

Saginaw-Bay City, via east side, operated at 1200 \mathbf{v} .

Saginaw-Flint operated at 1200 v after 1914. Jackson-Grass Lake operated at times for test at 5000 v DC during 1915.

In all above routes, short sections thru certain towns were operated at 600 v, as were all other branches not listed above. In a 1913 campaign of imporvement it was planned to convert the entire Battle Creek-Kalamazoo line to 1200 v third rail and 42 new car equipments were purchased for installation on old cars to make this change possible. While much of the work on the cars was done, the line work was never carried out.

The system was remarkable for many other engineering niceties in which it pioneered to a much greater degree than the average interurban. One of its distinctive features was its large fleet of all-steel interurban equipment. It was one of the first to have steel cars and its own engineers developed the handsome designs that became characteristic of it. The use of batteries to insure continuous steady car lighting despite third rail gaps and line voltage fluctuations was another advanced feature of its 1914 designs. The solarium observation end was practically originated here as a more practical alternative to the dusty and dangerous open observation end.

Shops built at Albion, near Jackson, became the maintenance headquarters for the system, altho local barns took care of servicing on each division.

Decline of the Interurban System:

Upuntil 1916 the system was aggressively expanding, with plans announced to extend to Benton Harbor on the southwest and between Flint and Owosso on the northeast.

But even as the system reached its peak it began to recede. The Grand Rapids-Kalamazoo line proved a sad disappointment as a traffic generator and this killed all plans for extension. The lease of the steam line to South Haven was dropped.

The first war came along to stimulate traffic and revive hopes of success, but as soon as the war ended the company's financial troubles resumed, compounded by inflation and the competion of buses and private automobiles.

The property was gradually broken apart and was abandoned branch by branch by early 1929.

JACKSON:

After several years of horse car operation, Jackson began operating electric street cars on September 19, 1891. On the first day a car was derailed, a de-wired pole hit a phone wire interrupting phone service, a broken trolley wire brought a call for the fire department and a fire horse died when it stepped on the livewire. This inauspicious start was soon overcome, and the system was expanded until ten routes radiated from the center of town.

The Vandercook Lake line was almost interurban in character. It operated along the side of the road thru suburban areas to Lakeview Park. The East Michigan and West Michigan lines used double-end cars as these lines shared trackage with interurban cars and no loops were provided.

In 1902 a promoter by the name of Boland acquired the line, then known as Jackson Consolidated Traction Company, as part of his projected Detroit-Jackson interurban. When this fell thru due to the completion of the competing Detroit Jackson & Chicago Railway (Detroit United system), the Jackson property became part of the Michigan United system, about 1907.

In the aftermath of the 1922 Michigan United receivership it became a separate company and in the following year it secured a victory at the polls which was unique in street railway history. This was its escape from the practically universal obligation of street railways to install and maintain the paving between its rails, this by the vote of the people of Jackson on April 1, 1923.

When the Michigan Electric (successor to Michigan United) collapsed in 1929, the Jackson Local operation became Jackson Transportation Company and included the former interurban operation as far east as Michigan Center, a 5-mile route almost entirely on private right-of-way.

Street railway operation in Jackson survived until June 27, 1936, the last vestige of the once grand Michigan Electric system.

BATTLE CREEK:

Strap rails carried horse cars on a route from the Grand Trunk Railway station to the Sanitarium for Battle Creek's first rail transit in 1883. A second line ran to Goguac Lake, south of the city. On this line the return trip was downhill, and the hay-burning motive power could ride serenely on the rear platform.

The line was converted to electricity in 1893. Michigan United Traction acquired the line in 1904. Double-truck cars came in 1910, steel cars in 1913.

To avoid two grade crossings with the new interurban route to Grand Rapids, the Upton Avenue line was relocated to private right-of-way in 1916. This route closely paralleled the interurban's entry into town but was operated independently, to avoid interference with the high speed trains. During the first World War, Michigan Railway built a branch into Camp Custer, seven

miles west of Battle Creek, and city cars as well as interurbans were pressed into service. Even a steam construction locomotive was utilized to haula 10-car commuter train of camp workers.

Electric railway decline here came rapidly after the war. Michigan United reorganization in 1923 brought separation of the city property. As Battle Creek Transportation Company, it ran its last when, on Friday, September 30, 1932, car #428 rolled into the barns.

Battle Creek is one of the few places where the memory of traction operation is kept alive in the names of two streets: Electric Avenue and Interurban Avenue, renamed in the 1920s when no one would have guessed that electric traction would ever end here.

SAGINAW-BAY CITY:

One of the earliest transit services in Michigan was offered by the Saginaw Street Railway, which opened a horse car line in December 1863. The then separate city of East Saginaw acquired a line in 1865. The East Saginaw company built a bridge across the Saginaw River and, as the Union Street Railway Company, extended its lines on the west, encroaching on the west side company. The Union company electrified its lines in 1890, then, in 1895, purchased and electrified the west side lines.

Bay City began running horse cars in 1865 on a line from the business center out to 35th Street in adjoining Portsmouth Township. Extensions were made in 1874 and 1885. A steam dummy switched freight cars over Water Street at night after the horse cars pulled in. An experimental electric car ran in Bay City in 1887, and the entire system was electrified in the early '90s. By 1901, 26 miles of track were in operation.

Saginaw's first interurban was opened in 1894. Starting in East Saginaw, the line crossed to the west side, ran thru Carrollton and Zilwaukee to Bay City, recrossing the Saginaw River south of that town on a swing bridge.

In 1897 a car, alleged to have been racing a Pere Marquette (steam) Railroad train, ran thru the open draw and plummetted into the river with the loss of 13 lives.

The interurban company took over the city lines in Saginaw in 1897 and became the Saginaw Valley Traction Company. In 1910 the Bay City lines were taken into the fold and the property changed its name to Saginaw-Bay City Railway Company. The company built amusement parks in southwest Saginaw and at Wenona Beach on the bay north of Bay City. In summer, thru service ran between the two parks via the interurban and city tracks.

Owned at this time by Commonwealth Power Company, the railway had the same management personnel as the Michigan United Railways, altho it was operated as a connecting line rather than as part of the Flint-Bay City interurban of the bigger system.

Jitney competition and higher costs plagued the company during and after World War I. Between March 1919 and August 1921 there were four costly strikes on the property and the carbarn in Buena Vista township burned with a loss of 33 cars. In the face of all this, the city of Saginaw refused to allow an increase from the 5¢ fare. The railway went into bankruptcy and suspended operations in August 1921.

While the politicians argued, jitneys provided the only available service. At every election thereafter into 1923 the voters were given a street car franchise proposition, but none succeeded in passing. While the situation hurt Saginaw immeasurably, it did help in other cities, where the authorities were more inclined to listen to reason in their negotiations with traction companies as a result of the "Saginaw situation".

Finally, in June 1923 an acceptable franchise was approved. During the negotiations which followed, the cars were refurbished in preparation for the resumption of service on November 1.

The new company, Saginaw Transit, reopened the city lines in Saginaw and a suburban service over the old interurban route only as far as Zilwaukee. The balance of this line and the Bay City routes were never restored.

The Zilwaukee line was abandoned the following year and the Saginaw lines were gradually replaced by buses, the last car run being made on October 9, 1931.

KALAMAZOO:

Horse cars came to Kalamazoo in 1885 with a route on Rose, Lovell and Asylum Streets. The system was expanded in ensuing years and it was electrified in 1893, the first cars running on June 18th of that year.

Losses showed up as early as 1896. The company proposed to reduce the burden by cutting off lines on Burdick, Patterson and Seminary Streets, but the city council refused to permit this and the profits from the remaining lines were forever discounted thereby.

In 1906 the Kalamazoo operation was absorbed into the Michigan United Railways. A shot of new life thru this larger corporation assured continuation of city operations for a while, but when interurban revenues fell off sharply after the first World War, the continuing drain of these city lines produced a crisis that was acute by 1919.

A new franchise was proposed permitting increased fares in return for improvements, but it was rejected by the voters. A fare increase was eventually granted but it only yielded a loss in passengers. With the folding of the interurbans in 1929 the city lines became Kalamazoo Transportation Company.

The new company asked for permission to change to buses in 1932, but this was refused. A strike in October of that year lasted three weeks and brought considerable violence. Service was resumed with all new employes and with jitney competition run by the discharged strikers. Under these conditions the company gave up, running the last car on November 2, 1932 after 48 years of street car service.

LANSING:

Horse cars began running on two routes in Lansing late in 1886. Four years later the company was faced with the need for new motive power. Conversion to electric operation was financed by a \$160,000 bond issue and on August 26, 1890 a trip was run for the celebrities of Lansing with the new cars "Nutwood" and "Dauntless".

The operation failed to pay its way and, after foreclosure, the company was reorganized as the Lansing City Electric Railway. One extension was made to the Agricultural College.

Again the property began to deteriorate and, late in 1899, the Hawks-Angus syndicate from Detroit took over, selling the line in turn in 1904 to a new group incorporated as the Lansing & Suburban Traction Company.

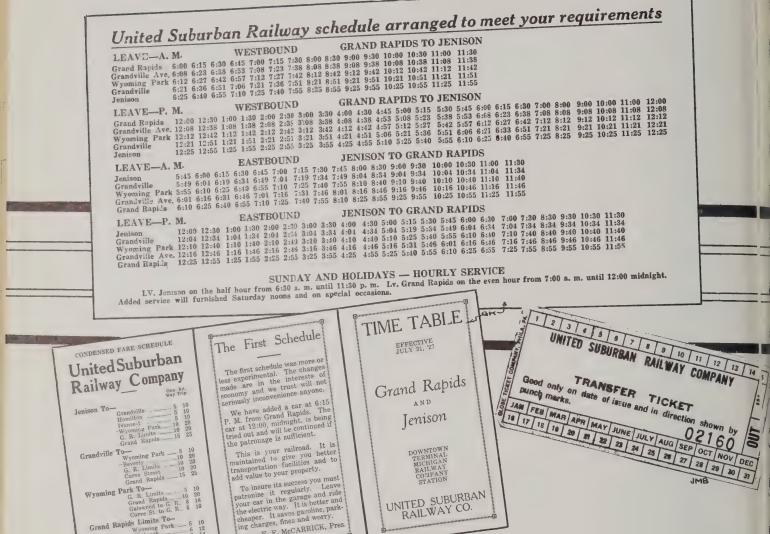
The new owners began long overdue extension and improvement. A line to Waverly Park was opened in 1904 and the College line was completely rebuilt.

In 1906 the property was taken into the Michigan United system by merger and for a time it was operated profitably. Decline of the interurbans in the period following the first World War brought crisis, however.

In 1920 the parent Michigan Railway, in a conference with city officials, threatened to suspend all local service in Lansing, Jackson, Kalamazoo and Battle Creek unless fare increases were permitted. The cities agreed; fare went up to ten cents per ride, but then Lansing ordered the fare down to six cents. In a strange wave of conformity, the company felt it was only fair to bring fares in the other towns down to the same level and it did so.

The results were catastrophic. The loss for one year ran \$403,000 and the company again threatened an end to service. Instead, in 1923 it introduced one man cars over some objections that had to be straightened out in court.

With abandonment of the interurbans in 1929, the line became Lansing Transportation Company. In October 1932 it suffered a two-month strike over a demand for a 10¢ hourly wage increase that was finally settled for only 1¢, bringing the men to a total of 32¢ per hour. Final abandonment of cars occured April 15, 1933.



GRAND RAPIDS-JENISON:

Grand Rapids Limits To-Wyoming Park Elmbrook

"The shortestrailroad with the longest list of stockholders in the world' started operating on July 27, 1927 over eight miles of double track of the former Grand Rapids Holland & Chicago Railway between Grand Rapids and Jenison.

E. F. McCARRICK, Pres.

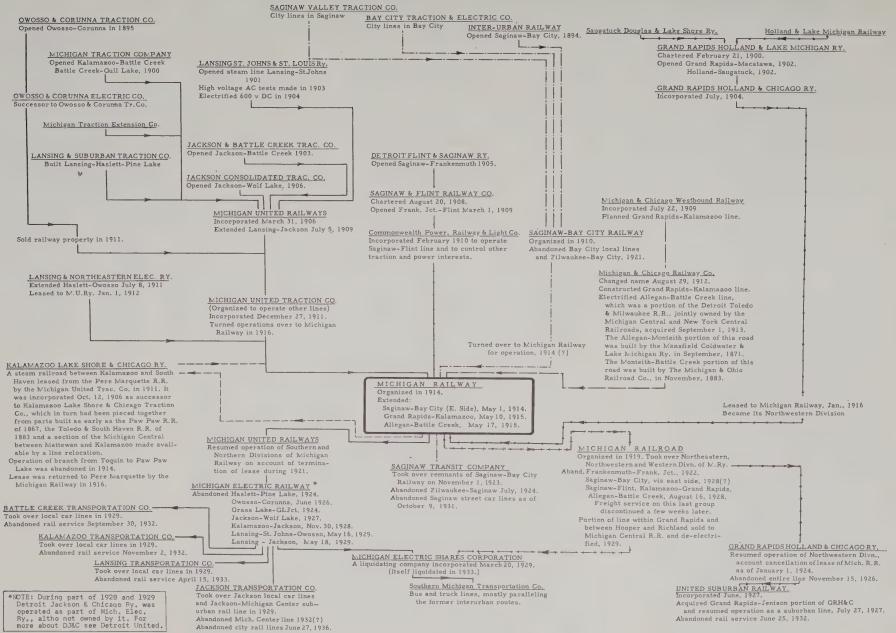


Some 700 stockholders had subscribed \$50,000 to re-establish car service over the recently abandoned but not yet torn up rail line, feeling that substitute transportation by bus had proved unacceptable.

The United Suburban Railway started business with 5 cars from a line in Maine and car #278 from Grand Rapids, ex-Muskegon.

Until Michigan Railway abandoned its private right-of-way line into downtown Grand Rapids, US used its route. Then it had to re-establish the track connection on Grandville Avenue to the Grand Rapids Railway which GRH&C had dropped in 1916. Car maintenance that had been handled at Michigan Railway's small Grand Rapids shop was shifted to Grand Rapids Railway's Hall St. s'.op.

Receipts built up for a while and, in September 1928, the competing bus line was bought out. The line quit only when Grand Rapids Railway decided to convert Grandville Av. to bus. Final operations occurred on June 25, 1932.







While under the direct ownership and control of the Commonwealth Power, Railway & Light Company, the Saginaw and Bay City car lines were operated as an autonomous unit under general supervision of the same people who ran the Michigan Railway system. A local superintendent was, however, in direct full charge of the area, uncluding the two city lines and the old interurban line along the west side of the Saginaw River between the two cities. The "East Side" third rail interurban was operated as a thru route to Flint, under another superintendent and with separate shop facilities.



ABOVE: Michigan Traction car "GALESBURG" at Brill plant in 1900.

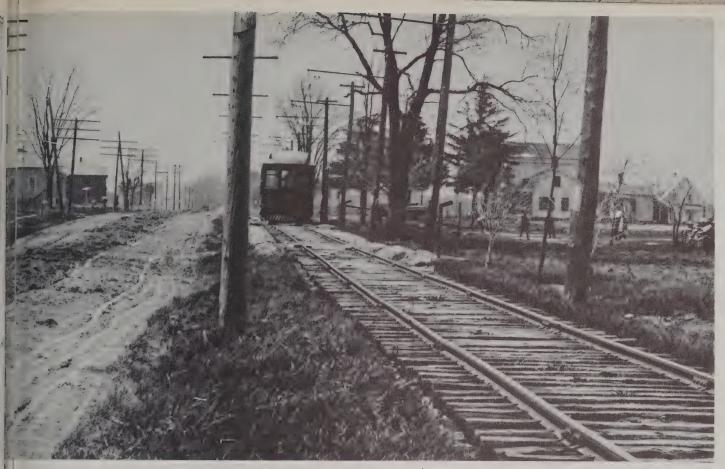
RIGHT: Michigan Traction #51 ascends viaduct over Michigan Central (steam) Railroad at a point between Augusta and Galesburg.

BELOW: Lansing & Suburban #201 rounds corner with Michigan State Capitol in background.

Both these pictures date about 1905.





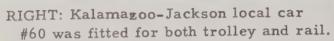


These two photos, taken in the early 1900s between Urbandale and Level Park, just west of Battle Creek, illustrate clearly why the coming of the interurban was eagerly accepted by rural residents who could anticipate little pleasure in travelling those gumbo 'highways'.





Nearness of "Bolan interurban between Grass Lake and Jackson to Detroit United line at crossing of Michigan Central Railroad is shown in view at less Michigan Railway predecessor's car in about to cross.





LEFT: Car 62 carried experimental 5000 v DC control and four motors, each with two armatures, for notable 1915 tests on Jackson-Grass Lake branch line, the same "Boland" line pictured at top of this page.

BELOW: Car 45 of Jackson & Battle Creek Traction tries out the Michigan Central viaduct in this 55-year old shot.

DARAN MICHIGAN RAIL ROAD CO.

SEEN STATE PROSENSER NO. 13

COLONIA PROSENSER PROSENSER NO. 13

COLOR NO. 13

COLOR

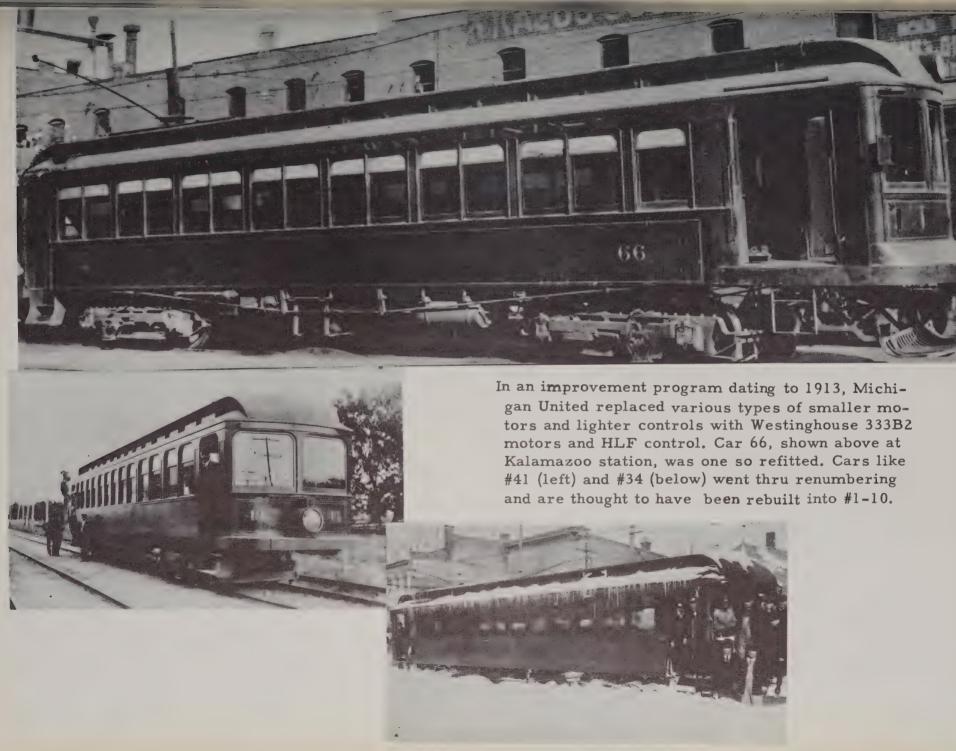
MICHIGAN RAILWAY CO.

Persist Walter Boker,

To Ride in Front Ventions of All Bridge Dec. 31.

No. 69







Probably made from one of the early two-window front cars (see photo s of #34, 41 elsewhere), #4 above rests between jobs at Jackson.

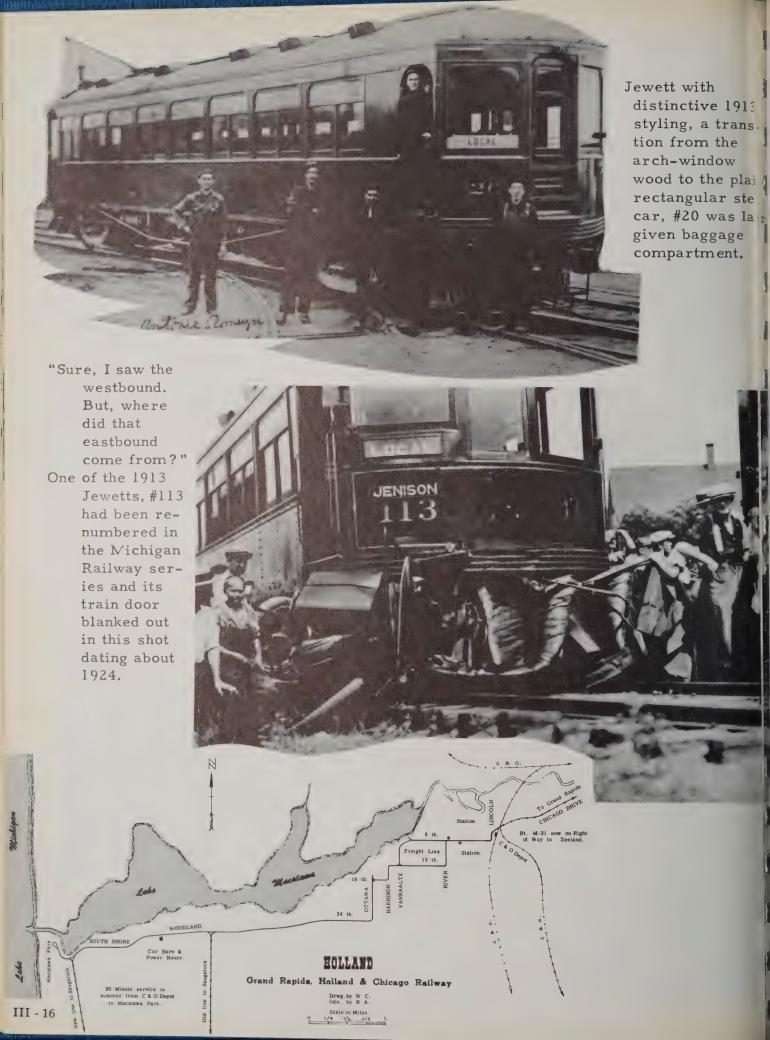
RIGHT: Oddity #847 on Saginaw-Frankenmuth run,





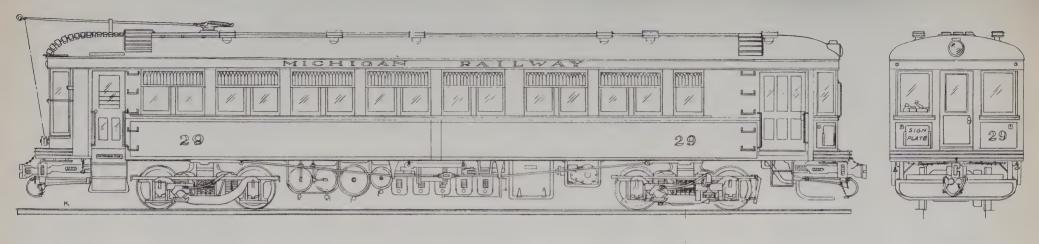
ABOVE LEFT: Stephenson car for Arnold's high voltage AC experiments on St. Johns line. LEFT: Early car "Stella" of Detroit Flint & Saginaw Ry. carried road number 2.

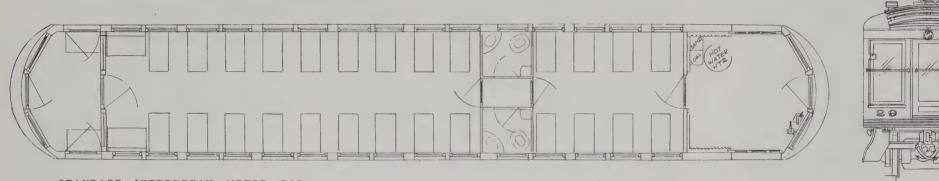


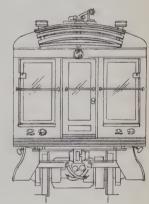












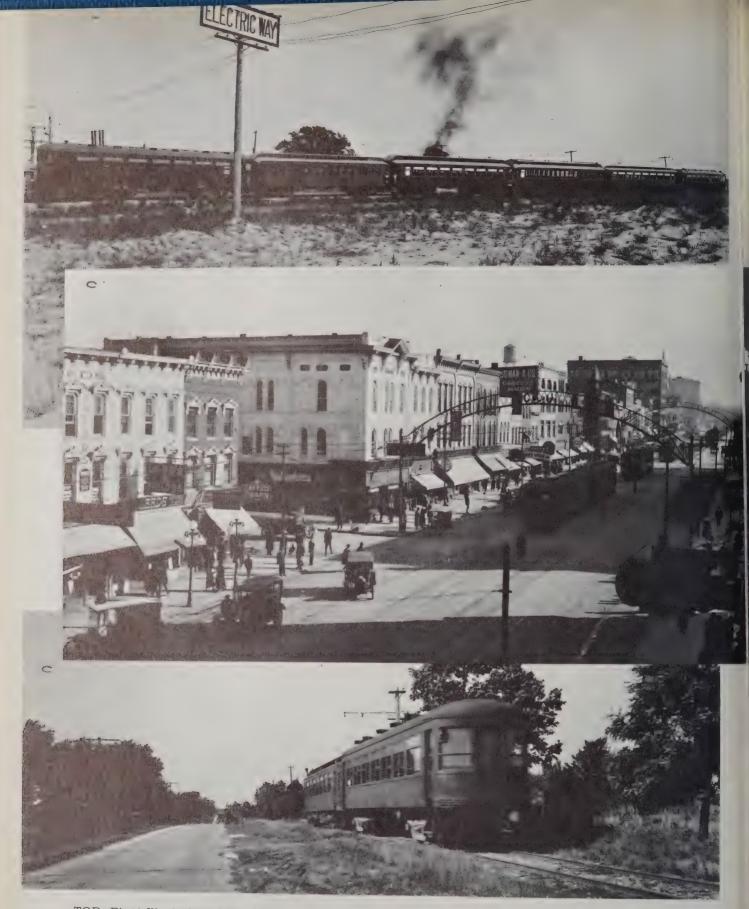
STANDARD INTERURBAN MOTOR CAR

This type of car was built in several orders and under several number series. All were built by St. Louis Car Company, along with all the other steel passenger cars with which the property was modernized and extended in the 1913-1918 period. Some of the equipments were furnished by General Electric and some by Westinghouse. The details below apply to cars 24-29.

Length over buffers	61'-0''	Width over posts	9'-5 3/4"
Length over pulling faces	62'-4''	Width of bulkhead doors	
Front to first bulkhead	10'-7"	end bulkheads	26''
Length of smoker	11'-3"	center bulkheads	23''
Length of passenger compartment	28'-3"	Height, rail over roof	12'-11 5/8"
Rear to last bulkhead	6'-6''	rail to side sill	43"
Post spacing	2'-97/8"	body	9'-4 5/8''
Heater: Peter Smith hot water #1		Ventilators	Peerless
Motors: 4-Westinghouse 333, 125	hp each	Control: Westinghouse HI	4, #20B master controller
Gear Ratio: 25:52	_	Truck: Baldwin 87" wheel	
Air brake equipment: WTB type Al	MM	Compressor	WTB
• •		Width of train doors:	28"

RAILWAY MICHIGAN

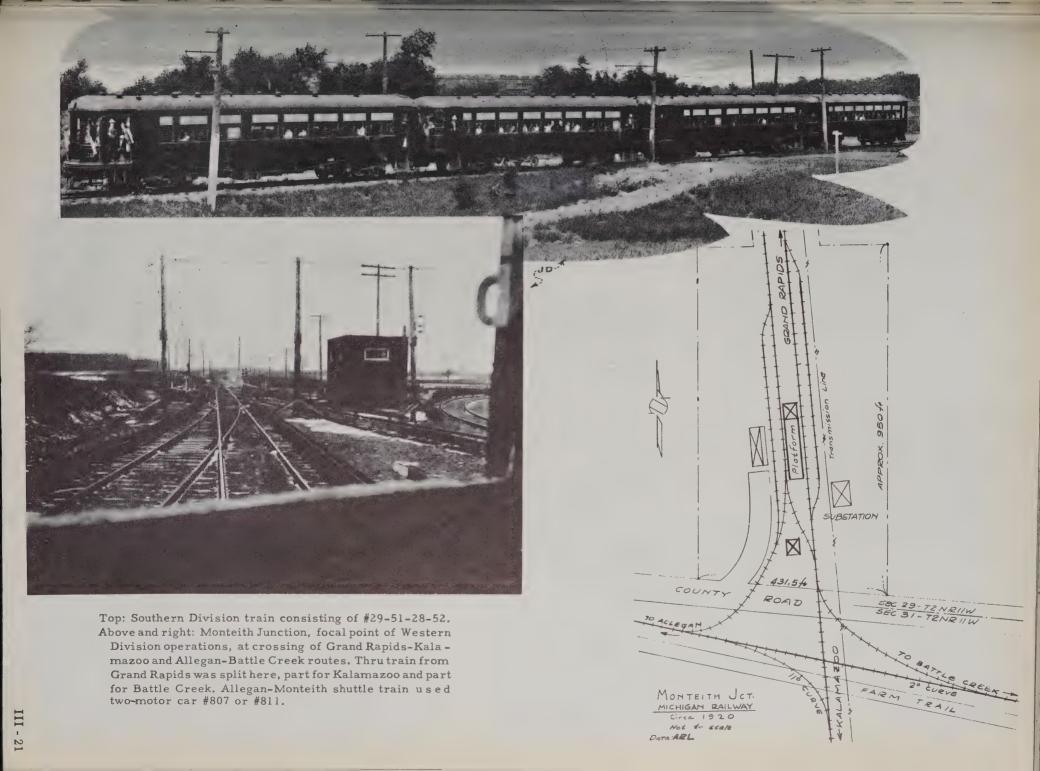
24-29



TOP: First World War brought intense training activity to Camp Custer, not far west of Battle Creek. Michigan Railway served the Camp by a branch of its southern Division. View shows motor #29 with four 2000-class old steam road coaches and interurban-type trailer #51 ready to load at the Camp. Wooden cars from the Northwestern Division were also assigned to this service temporarily for use as Battle Creek-Camp Custer shuttles.

CENTER: Saginaw limited train #157 running in two sections eases north thru the main part of Flint in this 1918 scene.

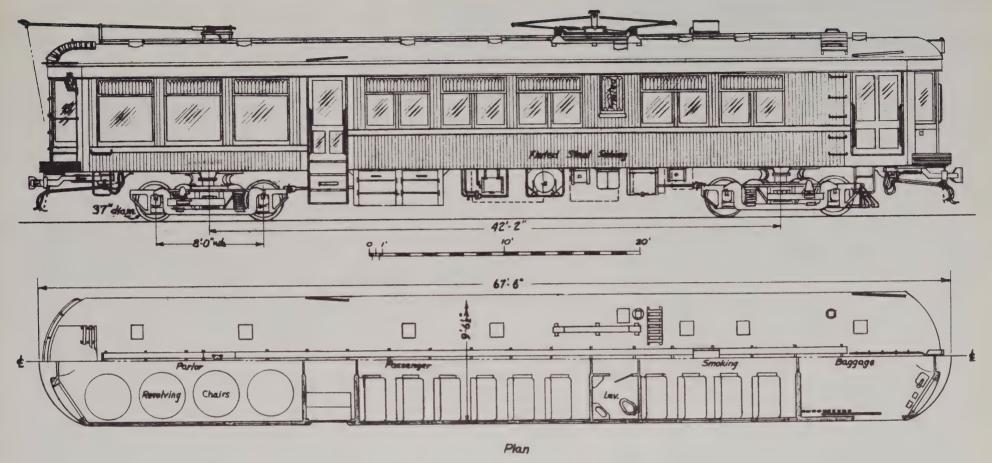
BOTTOM: Another Northeastern Division train, a Niles 30-class motor and trailer #57, rolls along the lonely highway north of Flint in 1920.

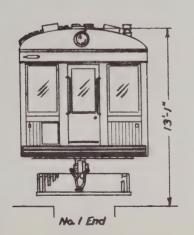


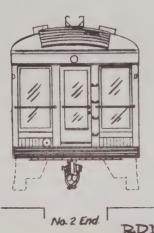












MICHIGAN RAILWAY COMPANY
Combination Baggage - Smoker - Coach-Parlor
Car numbers: 802, 804, 806, 808, 810, 814, 816
Built by the St. Louis Car Company, 1914-15.

All-steel cars, with deep fish-belly center sill and beaded (scribed) steel side sheathing. Equipped by General Electric Company for full speed operation on 1200 or 2400 v.



LEFT:

Ready to resume; northbound journe into Grand Rapids a train of cars 80 and 808 posed fo this 1916 photo a Wayland station,

Head car started a Kalamazoo, whil second car, starti ing from Battl Creek, was couple at Montieth Jct.

INSET:

For the completion the Saginaw-Flin line, this handsom old type of car wa furnished by th Niles Car & Mfg. C It was later rebuilt for train operation and could run at fu. speed on either 60 or 1200 v, from ei ther trolley or thir

GENERAL INFORMATION

Limited Trains—No excess fare charged on limited trains. These trains stop at all ticket stations and make a few designated stops on flag.

Despatch Freight—Packages will be carried on all cars at a small charge and delivery will be made from the passenger stations.

Freight Service—Daily freight service to all points on the system, making express time at freight rates. Send your shipments Electric to Michigan, Ohio, Indiana Points. Write Traffic Department, Grand Rapids, for Shippers' Guide.

To Stop a Train—Person desiring to board a train where stop is made only on signal, will give this signal by waving the arm during the day time and a light at night in view of the motorman, being particular to keep clear and off of the track!

Disputes—In the event of disagreement with conductors relative to tickets required, privileges allowed, etc., passengers are requested to pay amount charged, take receipt for same and refer the matter to General Superintendent, Grand Rapids, Michigan, for adjustment.

Lost Articles—For information inquire General Office, Grand Rapids.

eral Office, Grand Rapids.

Round Trip Tickets—Sold at all ticket stations at reduced rates.

Special Cars—Special cars may be chartered for theatre parties, excursions, etc., at special rates based on thirty or more passengers. For information regarding chartered cars, special rates, etc., ask local agent or address.

TRAFFIC MANAGER Grand Rapids, Michigan

GEO. B. HUNT GEN. FRT. AND PASS. AGT. Jackson, Michigan

CENTRAL STANDARD TIME

Time Table

SUBJECT TO CHANGE WITHOUT NUTICE

Grand Rapids, Holland & Chicago Railway

STEWART HANLEY, Receiver

FAST LIMITED AND LOCAL ELECTRIC SERVICE BETWEEN

GRAND RAPIDS BATTLE CREEK HOLLAND

KALAMAZOO SAUGATUCK **ALLEGAN**

THROUGH TICKETS ON SALE

AND CONNECTIONS FOR

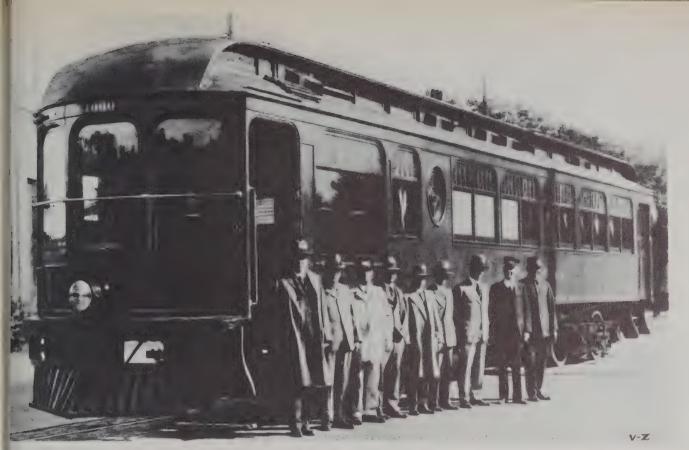
JACKSON LANSING OWOSSO YPSILANTI DETROIT ANN ARROR MUSKEGON GRAND HAVEN

Ralamazoo, lake Shore & Chicago Railway Co.

THE FRUIT BELT LINE:

PASS PASS CART OF COMMON C

J. H. WELDON III - 26



Between April 16th and 23rd of 1913, the business car MICHIGAN, #1000, made a 1000 mile trip covering the chain of electric railways which at that time connected Kalamazoo, Michigan, thru Ohio

to Brazil, Indiana. View left shows original car as built, while above and below, as revamped.



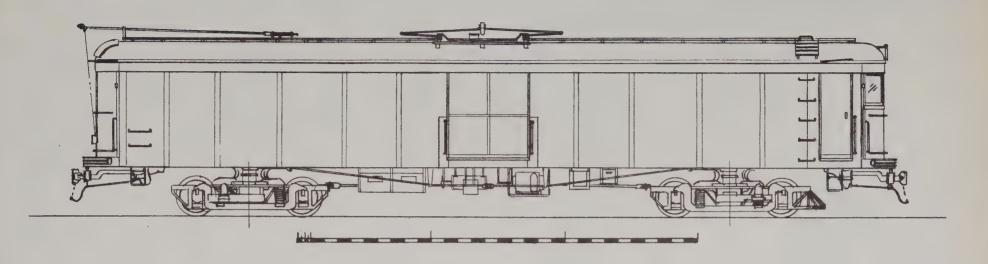


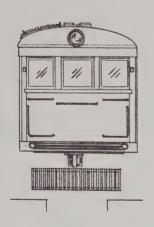


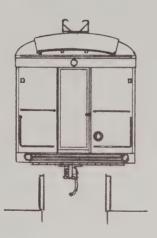




Neat freight equipment featured arch roof motors and trailers. Top: McGuire-Cummings #207. Center: Kuhlman #200 (later Shaker Heights "Ox"). Bottom: St. Louis steel trailer #255 at builders, October 15, 1913.







MICHIGAN RAILWAY COMPANY Express and freight motor cars #900-903 Built by the St. Louis Car Company in 1914

Length _____61'-6'' Width _____9'-6"

Motors ____4-GE 239, 140 HP each, with
gear ratio of 17:63 for a free
speed of 37 mph. Could run at
full speed on either 1200 or 2400 v.

Control ____GE type M. single end

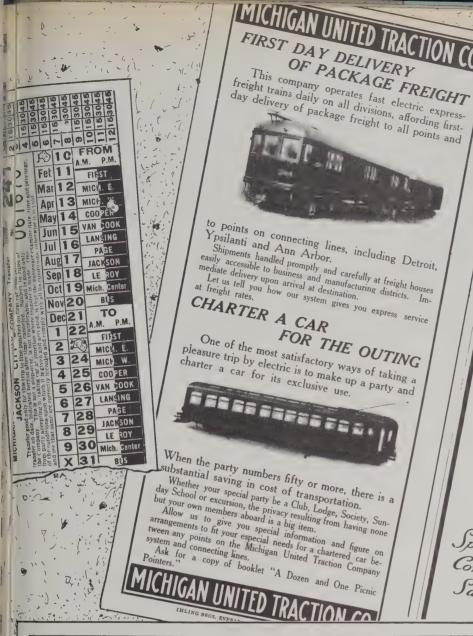
ntrol......GE type M, single end
Drawing: RDM

										,		_	1-
									-	- O	NOEMAL DIVISIONAL ASSIGNMENT		DATA COMPILED BY WCJ, GK DATA AS OF 1923 et seq.
07 80 07 07	EK EK	þm	KS	ORS	ROL	THO	S	LENGTH	WIDTH	도요	102	110	
CAR	3011	UILT	RUCK	010	CONT	EIG	SEAT	VER	WIDTH	E E	18/8/8	0.80	REMARKS
N N	BUL	- co	F	×	S	>	5	9	0	HEIG	1000	SEAR	
												10	
INTER	WEBAN P	1,	1	4 .	1		158-	10111	1 0 / 0 !!		2 /	25/	SINGLE END WOOD COMBINATION IN IN
1-10	ST. LOUIS	04	BALDWIN 84	4w333	W-HLF		58-		8-9"	-	Southern	52	Ex M.U.T. 31-40. 1,2,3,7,8,9,0 scrapped 24-28
13-15							50	50'		-	-	25/	SINGLE END WOOD COMB,
16-18	KUHLMAN	03	BALDWINK	4w333	W-HLF		64	56'-0"			Southern	152	EX JEBCT 16,17 scrapped before '29. SINGLE END WOOD COMB.
20-23	NILES		" 84	" "	"	ļ	56	"	8'-5"		Sathem	"	SINGLE END STEEL COMB.
24-29	ST. LOUIS	14	" 87"	"	"	106,000	"	61-0"	9-6"	13'-0"	Southern	"	SINGLE END STEEL COACH,
30-31	*	"	" 84"	A	"		11	56'-8"	"	"	Southern	+	EX M.U.T. ORIGINAL 50-CLASS TRAIL.
33-44	STEPHENSON	108-09	" 84"	" "	11		55	51-0"			NEOSTA	"	EX SAB. & FUNTRY, orig. 600 motors & Kiontrol.
50-59	ST. LOUIS	16	" 78'	NONE	NONE		52	53'-0"	9'-6"	13'-0"	S, North.	_	DOUBLE END STEEL COACH. Only 7 in this group in 123. They replace original 50-53, which
													are believed rebuilt to 30, 31, 821, 828; 56-8" cars. All of the 2nd-50-series are believed rebuilt after
													123 to *825-897.
60							40	45'-8"					(SINGLE END WOOD COMB.
66	STEPHENSON?	033	PECKHAM?	4 4 3 3 3 3 ?	W-HLF		54?	56-8"?			Southern	25/	been made from Lansing, St J. & St. L & screpped before '23.
82,85,86	" 2	117					44	44'-0"			SN?		SUBURBAN
103, 110	JEWETT ?	47	BRILL 275	4 34	X64	50,000	51	47:0"			NW,5		SINGLE END WOOD COACH Ex-GRHEC 18-type, returned to GRHEC '24.
112-115	JEWETT	13	BALDWIN 84	-	W-HL	85,000	56 to		9'-0"		NW, NE	25/52	SINGLE END COMPOSITE COMB. EX. GRHEC
116-121	ST. LOUIS	14	" 87"	11	11	99 000	56	61:0"	9'-6"	13'-0"	NWW	11	SINGLE END STEEL COMB., Ex GRAGO 24-29, returned to GRH&C '24.
150-151	Vewett ar Kuhlman	03?		None	None	1000	50			1	NW,5		SINGLE END WOOD TRAIL, EX GRHEL, returned to GRHEC '24.
, , , , ,	Auniman	-		770778	710116	-	100	7,,			.,,,,		returned to OKHEC 24.
802,804,906	ST. LOUIS	15	BALDWIN 96"	400239	GE-M	142,600	60	67'-6"	9'-6"	13'-1"	Weston	39/	SINGLE END STEEL COMB. WITH REAR SO-
808, 810 814, 816	"	15	" "	11	"	", ",	51	"	4	"		151	LARIUM DBS'V'N (originally parlor section) SINGLE END STEEL COMB. WITH REAR
812	BRILL	16	N //	"	11	131 000	52	66'-10"	9'-4"	"	Western	- 11	SOLARIUM OBSERVATION PARLOR.
801, 803	ST. LOUIS	15	BALDWIN87	-	GE-PC	131,000	-				Western	1	" (x-800; ORIGINALLY OPERATED WITH 80- LARIUM FORWARD, SOLD & GECO., '28. SINGLE END STEEL COMB.
805, 809	"	"	II W	26E239		106,000	56	61-0"	9-6"	13'-0"	Western	25/52	
813, 815	//				GE-M	99,100	-	4	"		Western	27/63	MONTEITH CARS, MADE ONE-MAN '26 ? SINGLE END STEEL COMB.
	"	14	" 84	-	W-HLF	106,000	/ 			"	NEwstan	25/ /52	SINGLE END STEEL COACH.
821, 823			07	"	")/	56-8"	"	"	NEaston	"	Ex M.U.T. ORIGINAL (56'-A') 50-closs trails
833,836,837	,,	16	" 78"	"			52	53'-0"	"	"	NEgstern	"	SINGLE END STEEL COACH, Ex. M.Ry. SELOND 50-class (53') trail.
0.47		03											
847		14		4#333	W-HLF		40	46'-0"			NEwstern		SINGLE END WOOD COACH, FRANKEHMUTH- SAGINAW CAR, ex SAG-BAYGTY RY COMB.
849,851 853,855	ST. LOUIS	17	BALDWIN 87"	11		106,000	56	61-0"	9:6"	13'-0"	NBustern		SINGLE END STEEL COMB, SOLD 1930 to LAKE SHORE ELEC. Ry, 849,853 became LSE 182,183.
857, 859	CINCINNATI	14		4 Chalmers	K-34		56	50'-0"	8'-9'z"		Southern		SINGLE END COMPOSITE COMP, believed ex- Int. Ry. & Term., used on Jackson suburban lines.
MICHIGAN"	McGuire Commines	//		4 w 3 3 3	W.HLF		22	51:0"	8'-9"		S,N		SINGLE END BUSINESS CAR, original 4GE- 210 motors, Double end K34-1600 y control replaced 114.
FREIGH	T & SERV	ICE	INTER	URBA	4N) N	10TOR	≥,						
102-104	BRILL ?	157	Baldwin ?	4		WEIGHT		50:6"	8'-10"	14'-0"	NWest'n		BOX MOTOR SINGLE END, believed to be ex-GRHEC 127-128-129, returned to lessor 24.
200-201	HUHLMAN	-	BRILL 27MCB		2-W-HL 337D	85000		53 ?	8-10?	13'-0?	Southern		DOUBLE END BOX MOTOR one sold 29 to Northern Ohio Int., later to Shake Hts. "OX".
202,203	ST. Louis		McG-C-204-78	455214	K34	55,000		50'-6"	8'-7"		Southern	19/1	SINGLE END BOX MOTOR
204-209	Mc Guize - Cummigs	//	1/	1/	2×34	67,200		52'-6"	8'-11"		Southern	17/60	DOUBLE END BOX MOTOR
215,216,218								50'-8"	9-6"		,,,,,	16/61	BOX MOTOR
219,904,909	ST. LOUIS		BALONIN87"	44333	W-HLF	78,500		60'-6"	9'-6"		S, Westh	16/61	BOX MOTOR SINGLE END 219-SINGLE FOR STEEL OTHERS DOUBLE FOR HOOD.
905, 906	NILES ?	08 E	BALDWW 84"	4-333	W-HLF			51' ?	9'-6"	12'-8"	NEasth	16/61	
900-903	ST. LOUIS	15	BALDWIN 96"	46239	GE-M			61-6"	9'-6"	13'-3"	Western	16/61	SINGLE END STEEL BOX MOTOR
1100	NILES	1 .	BALDWIN	4w333								161 25/ ₅₂	SINGLE END SUPPLY & WRECKER
1102	CO. SHOP	,	PECKHAM78"		K-34			37'-4"	9'4"			17/	WORK (FLAT WITH CENTER CAB)
1//3	KUHLMAN		"	4GE216	"			48'-9"	8-8"			.00	LINE CAR, SINGLE END
FREIG	HT TRAIL	4:	, -					70 0	0-0		S, No 44 h	169	2.72
250-289			Wolfe, Diamond, Boldwin	TRAIL	NONE	APPROX.		4/ to 50'	8'-8'40				BOX TRAU ACCURATION
1630		(7	Boldwin	,,,,	.5/42	APPROX		50'	8'-11"		SYSTEM		BOX TRAIL, ARCH ROOF
5000-						40000	-						BOX TEAIL
1500- 1524 VIE.													* 1
401 - 407 var		+											FLAT TRAIL
- TOT Vak													" "

ROSTER INFORMATION is one of the least known areas in the story of Michigan Electric Lines. Up to this writing, no official company records have been unearthed. Writeups appearing in the contemporary trade press were studied, but they are peppered with a number of slight inaccuracies which have been worked out as well as possible by careful study of old photos and by assistance from a sale catalog of Hyman-Michaels Company, prepared in 1929 when it junked the southern division. The recollections of Carl Decker, who worked on the road for a few years beginning in 1918, cleared up some doubts about the western division.

the western division.

Not included are the city cars, on which too little was found to afford a worthwhile tabulation. Also not included are cars thought to be off the road before 1923, like the McGuire-Cummings #68, sold to Arkansas Valley Interurban before 1918. Information on service cars is also certainly incomplete.





RAILROAD AND BOAT CONNECTIONS

LANSING—Grand Trunk, for Chicago, Port Huron and Detroit. Pere Marquette, for Chicago, Grand Rapida, and Detroit. Michigan Central for Bay City and Saginaw. L. S. & M. S., for Hillsdale.

BATTLE CREEK-Grand Trunk, for Chicago and Port Huron. Michigan Central, for Chicago, New York, Boston, Goshen, and Allegan.

OWOSSO—Grand Trunk, for Detroit, Grand Haven, Murkegon and Grand Ramds. Michigan Central, for Saginaw and Bay City. Ann Arbot Ry., for Toledo. Ann Arbot Calillac, and Frankfor.

DETROIT — Postchartzian, Cafillic, Fairfax, Crirwold, Bruanwin Tuller, Noranadis, Wayne, Burna, Charlevia, Libray, Park Meti pole, Morgan, Nortos, Oriental, St. Claire, Victory, Grad Unit Schartzian, Park Marchartzian, Berghoff, Columbia, Nigara, Holla, Potagra, Marchartzian, Berghoff, Columbia, Nigara, Holla, Potagra, Visters, Savy, BATTLE CREEK Poul Tavern, Halludy Inn, Clifton House Burnard JACKSON—Olespe, Dallano, Johon, Rahl, Stowell, Plaza, American, LANSING—Dewney House, Wentworth, Butler, Rencer, Commercial Hudson, Grand, Park

ALBION—Albion House.

MARSHALL—Royal, Herndon, Dart Inn.

GALESBURG—Bennett, Hill House.

LESLIE—Carrol, New Leslie.

OWOSSO-National, Wildermuth, Hauck, Occidental

SUMMER HOTELS

GULL LAKE-Allendale, Elks' Club House (member WOLF LAKE-The Miller

PINE LAKE-Nemoka Inn. WAVERLY PARK-The Waverly.

RATES OF FARE

STATION	Fre DBTS		JAN		Pn Jack		Pr BATTLE			NAZOO
	One Way	Round Trip	One Way	Round Trip	Une Way	Round Trip	Ose Way	Round Trip	Une Way	Rosad Trip
Albion. Augusta Battle Creek Constock	1 30 1 96 1 70 2 10	2 60 3.80 3 40 4 20	1 04 1 64 1 44 1 84		.30 90 70 1 10	60 1 70 1 40 2 30	10 . 20 10	80 40 .90	85 30 45 10	1 70 60 90 20
taledurg Int. Jackson	2.00 1.61 1.00 2.15	4.00 3.20 2.00 4.30	1.74 .18 .74 1.89	.35 .25 1,45	1.00 .61	2.00 1.20 2.80	.30 1.31 .70	1.40	.20 1.76 1.15	2.80
Kulamazoo Laushig Leslie Masou Marshall	1.74 1.31 1.50	3.45 2.62 3.00 3.00	.43	85	.74 .81 .50	1.45	1.44 1.01 1.20	40	1.89 1.46 1.65 65	1 30
Rives Junction St. Johns Haslett	1.16	2.42	.90 .53 .50 .15	1. 05 .90 .25	.16 .21 1.21	.80	.54	1.00	1.86	1.95
			.2% .88 .42 .54	.55 .75 .84 1.05	1 02 1.12 1.16 1.28					

KALAMAZOO-DETROIT 12 A Saving of 72 Cents on One Way Fare

LIMITED TRAINS DAILY



GENERAL INFORMATION

GENERAL INFORMATION

Purchase Tickets—Passengers are requested to purchase tickets before entering trains.

Baggage and Express—Baggage checked and United States Express received at all stations.

Tickets—Through one-way and round-trap tickets from points on the Michigan United Traction Company to the Detont, Jackson & Chicago Ry., for sale at all ticket foffices No stop-over allowed on teckets. By purchasing tickets through to destination inconvenience at junction points is eliminated. States Express received at all stations.

Mileage—One-thousand-mile bearer books, good for one or more persons one year from date and between all stations. sold at all ticket offices. This mileage is transferable and can be-used by one or more persons.

Limited Trains—No excess fare charged on limited trains. These trains stop at all ticket stations and make a few designated stops on flag.

Children—Children under 6 years are carried free when accompanied by an adult; children over 6 years are charged full fare.

ccompanied by an adult; children over 6 years are charged ill fare.

Baggage—Baggage checked and handled for a nominal harge of 25 cents for each piece.

Bicycles, Baby Carriages—Bicycles and haby carges must be checked, and are charged for at the rate of 25 cents each. Passengers will be permitted to carry small, folding to construct the control of the control of

at all licket stations.

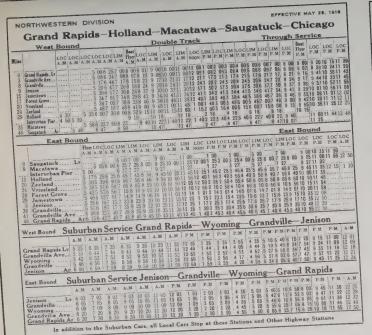
Refreshment Stands—Refreshment stands are located at Jackson and Lansing interurban stations.

Time—All trains are run on Central Standard Time, schedules subject to change without notice.

Schedules—For schedules of all interurban divisions see

C. E. MORGAN Gen'l Superintendent GEN'L OFFICES, JACKSON

F. W. BROWN Gen'l Express and Pass, Agt.



CHICAGO SERVICE

Graham & Morton Transportation Company boats running daily between Holland and Chicago, connecting with the Michigan Railway at Holland carrying passengers and freight, opens a new line of travel for South Central Michigan travelers. Ask the local agent for rates and connections.

Freight—Daily freight service between Chicago and Michigan Points affords express service at freight rates. Make your next shipment via Electric.

DETROIT-BUFFALO-CLEVELAND

Seven trains each way daily to Detroit, making connections with daily D. & C. boats to Buffalo and Cleveland. "Travel the Electric Way" for safety, comfort and convenience.

Vacation Cottages-Persons desiring information regarding cottages for rent, or having cottages to rent, at any of the resorting cottages to reat, at any of the re-sorts in Southern Michigan, can obtain the information from the General Passenger Agent at Jackson or the Traffic Manager at Grand Rapids.

Saugatuck—Ottawa Beach—Macatawa
Gull Lake—Pine Lake
—and many other Summer Resorts are located on the lines of the

MICHIGAN RAILWAY COMPANY

Make a Sunday trip to each Resort and see the beauty spots in Michigan. Good fishing, boating and entertainment at each

Ship Electric To CHICAGO-MILWAUKEE-BUFFALO CLEVELAND-TOLEDO-DETROIT

General Information

Limited Trains-No excess fare charged on limited trains, except in chair compartment. These trains stop at all ticket stations and make a few designated stops on

Despatch Freight—Packages will be carried on all cars at a small charge and delivery will be made from the passenger sta-

Freight Service—Daily freight service to all points on the system, making express time at freight rates. Send your shipments Electric to Chicago, Detroit, Buffalo, Cleveland and Central Michigan Points.

Purchase Tickets-Passengers are requested to purchase tickets before boarding trains.

To Stop a Train-Persons desiring to signal, will give this signal by waving the arm across track by day, and using a light at night.

Disputes—In the event of disagreement with conductors relative to tickets required, privileges allowed, etc., passengers are requested to pay amount charged, take receipt for same and refer matter to General Superintendent, Jackson, Mich., for adjustment.

Special Cars-Special cars may be charered for theatre parties, excursions, etc., at special rates based on fifty or more passengers. For information regarding chartered cars, special rates, etc., ask local agent or addrage.

F. W. BROWN, Traffic Mgr., Grand Rapids. GEO. B. HUNT, Gen. Frt. & Pass. Agt., Jackson.

WESTERN NORTHWESTERN DIVISIONS



TIME TABLES

SUBJECT TO CHANGE WITHOUT NOTICE

Of Through Limited and Fast Local Passenger Trains Between

GRAND RAPIDS KALAMAZOO HOLLAND ALLEGAN

Direct Connections to

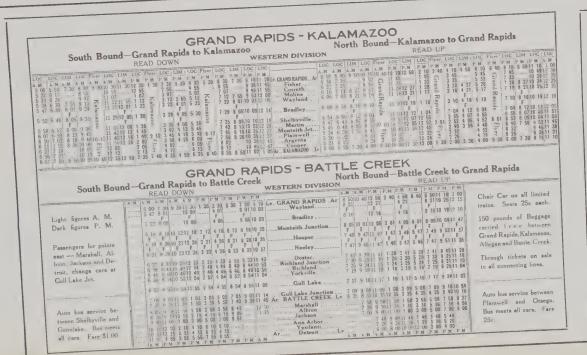
SAUGATUCK

BATTLE CREEK

CHICAGO, MUSKEGON, MILWAUKEE JACKSON, LANSING, DETROIT BUFFALO, CLEVELAND, TOLEDO

EFFECTIVE MAY 21, 1916

CENTRAL STANDARD TIME





GC

NORTHERN DIVISION

JACKSON - WOLF LAKE - GRASS LAKE

EFFECTIVE MAY 21 1916

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† Daily except Sunda	lay.				

ELECTRIC AND BOAT TO CHICAGO. Ask the Local Agent About Rates. ELECTRIC AND BOAT TO CLEVELAND AND BUFFALO. Through Tickets. Use Michigan Railway Lines Between Flint, Saginaw and Bay City.

PACKAGE FREIGHT CARRIED ON ALL PASSENGER CARS. FROM TWELVE TO TWENTY FOUR HOUR FREIGHT SERVICE BETWEEN ALL STATIONS. THROUGH FREIGHT RATES AND SERVICE TO CHICAGO.

LANSING - PINE LAKE DIVISION

EFFECTIVE MAY 21, 1916

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GULL LAKE SERVICE

A special car runs between Yorkville and Gull Lake Junction making connections with all Southern Division trains.

In addition to this service the Western Division trains. Battle Creek to Grand Rapids every two hours, stop at Gull Lake and

Grand Rapids—Chicago—Muskegon
All west bound Limiteds make connections at Battle Creek for Grand Rapids—direct connections at Grand Rapids for Muskegon, Grand Haven, Holland and Saugatuck—Boat connections are made at Hol land for Chicago and at Muskegon for Mil-

DETROIT-CLEVELAND-BUFFALO East bound Limiteds run through to De-troit making boat connections for Cleveland and Buffalo.

VACATION COTTAGES-Persons desiring information regarding cottages for rent, or having cottages to rent, at any of the resorts in Southern Michigan, can ob-tain the information from the General Passenger Agent at Jackson or the Traffic Manager at Kalamazoo

FAST EXPRESS-FREIGHT SERVICE This company operates express and light freight trains between all stations, affording first day delivery between all stations on the

Freight terminals are easily accessible to business and manufacturing districts and are equipped with modern facilities. A shipment by electric means prompt and careful handling with no increase in rates over other

Ship Electric to CHICAGO-MILWAUKEE-BUFFALO CLEVELAND-TOLEDO-DETROIT

GENERAL INFORMATION

Limited Trains-No excess fare charged on limited trains, except in chair compart-ment. These trains stop at all ticket stations and make a few designated stops on

Baggage-Northern, Southern and Western Divisions—150 lbs, checked free on each first-class full fare ticket. Not checked on mileage or commutation tickets.

Baggage—Northwestern and Northeast-ern Divisions—Checked between all stations for a nominal charge.

Purchase Tickets-Passengers are requested to purchase tickets before boarding trains.

To Stop a Train-Persons desiring to board a train where stop is made only on signal, will give this signal by waving the arm across track by day, and using a light

American Express-Operates over Grand Rapids-Holland Division

Adams Express-Operates over all other divisions and connecting lines.

Disputes—In the event of disagreement with conductor relative to tickets required, privileges allowed, etc., passengers are requested to pay amount charged, take receipt for same and refer matter to General Super-intendent, Jackson, Mich., for adjustment.

Special Cars-Special cars may be chartered for theatre parties, excursions, etc., at special rates based on fifty or more passengers. For information regarding chartered cars, special rates, etc., ask local agent or

F. W. BROWN, Traffic Manager, Kalamazoo, Mich. GEO. B. HUNT. Genl. Frt. & Pass. Agt., Jackson, Mich.

CENTRAL CITY BOOK BINDERY, JACKSON, MICHIGAN

SOUTHERN and NORTHERN DIVISION



SUBJECT TO CHANGE WITHOUT NOTICE

Of Through Limited and Fast Local Passenger Trains Between

JACKSON LANSING ST. JOHNS

KALAMAZOO BATTLE CREEK DETROIT OWOSSO.

GRASS LAKE AND INTERMEDIATE STATIONS

Showing Connections to

GRAND RAPIDS HOLLAND

CHICAGO MUSKEGON

EFFECTIVE MAY 21, 1916

CENTRAL STANDARD TIME

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47 Ar. JACKSON AT 4 50 5 47 18 50 97 478:50 9 37 11*00 12 25
West. Cars stop on flag. *Connection at Owosso with cars for

Dark figures P. M. Note-Limited cars make local stops between Lansing and Owosso.

Saginaw=Bay City Railway Co. TIME TABLE No. 5 TAKING EFFECT SUNDAY, MAY 12th, 1918 AT 3:30 A. M. CENTRAL STANDARD TIME FOR THE INFORMATION AND GUIDANCE OF EMPLOYEES ONLY AND NOT FOR THE PUBLIC C. H. SMITH Supt. Transportation Supt. T



GK

Time Table No. 5 taking effect Sunday, May 12, 1918, at 3:30 a.m superseding Time Table No. 4, dated February 10, 1918.

ORTHBOUND							ì	5A	GI.	NA		_	CLA		LΥ	G.		K							
STATIONS	337	409	335	407	333	331	329	327	325	323	321	319	317	315	313	311	309	307	305	403	303	401	301	1200	STATIONS
AND SIDINGS	Only	Sunday	Only	Daily Except Sunday P. M.						Daily P. M.				Daily A. M.		Daily A. M.	Daily A. M.			Sunday			Sunday	Distance for Sagnas w	AND SIDINGS
SAGINAW	10 50	10 50	9 50	9 50	8 50	7 50	7 00	6 00	5 00	4 00	2 50	1 50	12 50	11 50	10 50	9 50	308 8 50	8 00	7 00	6 20	6 00	5 30	5 00	0.00	SAGINAW
N. SAGINAW	10 55	10 55	9 55	9 55	8 55	7 55	7 05	6 05	5 05	4 05	2 55	1 55	12 55	11 55	10 55	9 55	8 55	8 05	404 7 05	6 25	6 05	5 35	5 05	0.64	N. SAGINAW
MERSHON Suling No. 1	11 00	11 00	10 00	10 00	9 00	8 00	7 10	6 10	5 10	4 10	3 00	2 00	1 00	12 00	11 00	10 00	9 00	8 10	7 10	6 30	6 10	302 5 40	5 10	1.60	MERSHON Siding No. 1
CARROLLTON Siding No. 2	11 05	11 05	10 05	10 05	9 05	8 05	7 15	6 15	5 15	4 15	3 05	2 05	1 05	12 05	11 05	10 05	9 05	8 15	7 15	6 35	6 15	5 45	5 15	2.69	1 09
ZHEWAUKEE Wye Curve		11 10 P. M.		10 10 P. M.						4 20	3 10	2 10	1 10	12 10	11 10	10 10	9 10	8 20	7 20	6 40 A. M.		5 50 A. M.	5 20	4.37	1 68
DICK'S Siding No. 4	11 15		10 15		9 15	8 15	7 25	6 25	5 25	³²⁴ 4 25	3 15	2 15	318 1 15	12 15	314 11 15	10 15	310 9 I.5	308 8 25	³⁰⁶ 7 25		304 6 25		302 5 25	6.98	DICK'S Siding No. 4
RIVER Siding No. 5	11 20		10 20		9 20	8 20	7 30	6 30	5 30	4 30	3 20	2 20	1 20	12 20	11 20	10 20	9 20	8 30	7 30		6 30		5 30	8.61	1.63
BULLOCK Siding No. 6	11 25		10 25				3.32							1		Į	9 25				6 35		5 35	10.27	Siding No. 6
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SAGINAW - BAY CITY RAILWAY CO. LOCAL SERVICE BETWEEN SAGINAW AND BAY CITY Bay City 5 00 0 00 7 00 8 00 8 50 9 50 10 50 11 50 12 50 1 50 2 50 4 00 5 00 6 00 7 00 7 50 8 50 9 50 10 50 1 50 12 50 1 50 2 50 4 00 5 00 6 00 7 00 7 50 8 50 9 50 10 50 1 50 12 50 1 50 2 50 4 50 5 50 6 50 7 50 8 50 9 50 10 50 11 20 12 20 1 20 2 20 3 20 4 50 5 50 6 50 7 50 8 50 9 50 10 50 11 20 12 50 1 50 2 50 3 50 3 6 50 6 50 7 50 8 50 9 50 10 50 11 20 12 50 1 50 2 50 3 50 3 6 50 6 50 7 50 8 50 9 50 10 50 11 20 12 50 1 50 2 50 3 50 3 6 50 6 50 7 50 8 50 9 50 10 50 11 20 12 50 1 50 2 50 3 50 4 50 5 50 6 50 7 50 8 50 9 50 10 50 11 20 12 50 1 50 2 50 3 50 4 50 5 50 6 50 7 50 8 50 9 50 10 50 11 20 12 50 1 50 2 50 4 50 6 50 6 50 7 50 8 50 9 50 10 50 11 20 12 50 1 50 1 50 1 50 1 5
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GENERAL INFORMATION

Limited Trains—No excess fare charged on limited trains. These trains stop at all ticket stations and make a few designated stops on flag.

Baggage—150 pounds checked free on each first-class full-fare ticket.

Freight Service—Daily freight service to all points on the system, making express time at freight rates. Send your shipments Electric to Detroit and Central Michigan Points.

Purchase Tickets—Passengers are requested to purchase tickets before boarding trains.

To Stop a Train—Persons desiring to board a train where stop is made only on signal, will give this signal by waving the arm across track by day and using a light at night.

Disputes—In the event of disagreement with conductors relative to tickets required, privileges allowed, etc., passengers are requested to pay amount charged, take receipt for same and refer matter to Superintendent, Saginaw, Mich., for adjustment.

Special Cars—Special cars may be chartered for theater parties, excursions, etc., at special rates. For information regarding chartered cars, special rates, etc., ask local agent or address

C. H. SMITH, Supt., Saginaw, Mich.

POWERS-TYSON

NORTHEASTERN DIVISION

TIME TABLES

EFFECTIVE MAY 12, 1918

SUBJECT TO CHANGE WITHOUT NOTICE



FAST
LIMITED & LOCAL ELECTRIC SERVICE
BETWEEN

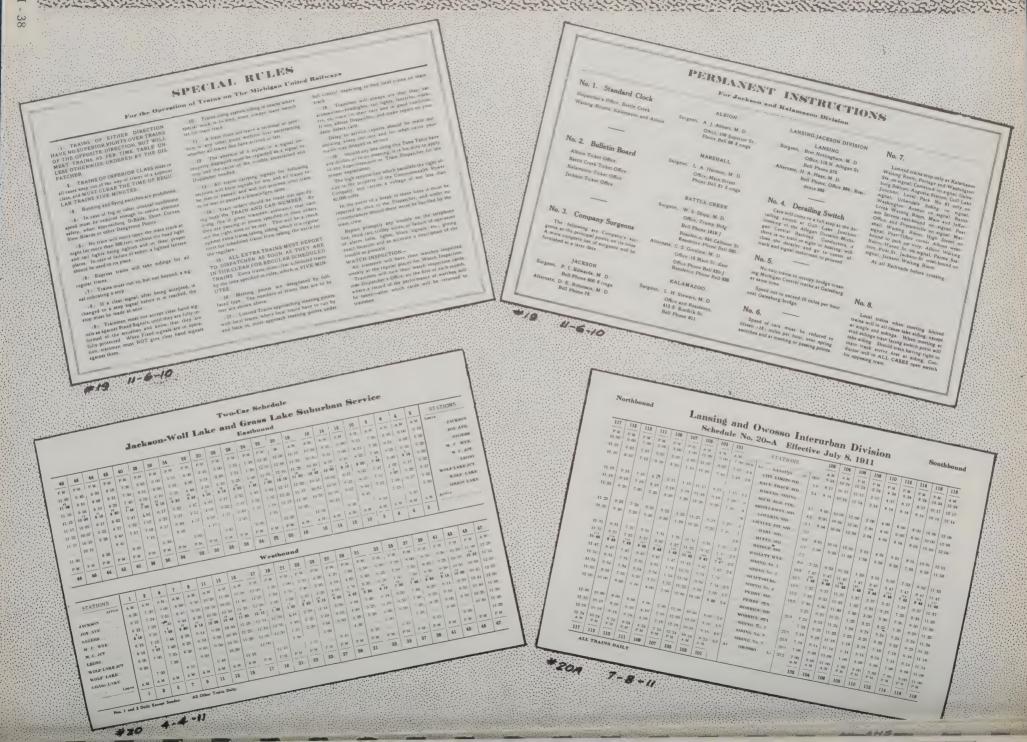
BAY CITY SAGINAW
BRIDGEPORT FRANKENMUTH
BIRCH RUN CLIO
MT. MORRIS FLINT AND
DETROIT

THROUGH LIMITED SERVICE BETWEEN BAY CITY, SAGINAW AND DETROIT MAKING CONNECTIONS TO AND FROM CLEVELAND, BUFFALO AND TOLEDO

CENTRAL STANDARD TIME

Michigan Railway, Northeastern Division timetable of 1918 included Saginaw-Bay City Railway it then operated.

						NO	RTHEASTERN DIVISI	ON									
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		15 7 10	8 29 9 8 44 10	55 10 29 1	1 55 12 2	29 .00	LV FLINT PARKLAND	Lv 1	55 2 29 06 2 44	3 55	4 29 5 5 4 44 6 0	5 6 29 6 6 44	7 55 8 06	8 29 8 44	9 55 10 59 10 03 11 17		
	6	39 7 35 15 7 42	3 50 10 8 57 10	11 10 50 1	2 11 12 5	50 4.56 57 7.41	FLINT CITY LIMITS.	2 2 2	11 2 50 16 2 57 25 3 08	4 16	4 57 6 1	6 6 57	8 16	8 57 9 08	10 13 11 29		
		55 7 53	9 08 10	25 11 08 1	2 25 1 6	08 12.04 20 17.87	BIRCH RUN	2	33 3 20	4 33	5 20 6 3	3 7 20	8 33	9 21	10 32 11 49		
	7	24 8 281	9 34 10 9 42 10	16 11 4211	2 48 1 4	12 27.16	BRIDGEPOR L	2	46 3 42 10 4 10								
5 6		50 8 50 1 25 9 28 1	10 10 11 10 50 11	10 12 10 50 12 50	1 50 2	50 47 78	Ar BAY CITY	Ar 3	50 4 50	5 50	6 50 7 5	0 8 50	9 50	10 50	11 50	1	
WEST BOUND	FROM	EDANIA	VENIMI	TU			NKENMUTH BR	ANI	~LJ		т	FRA	NKE	NMU EAD	TH-EA	ST I	BOUND
WEST BOOKE	READ				ŀ	KAI				- AM	PM P	n I Pi		PN	-		
	PM PM	PM	PM PM	PM	AM AM	MILES	STATIONS	WILES A		- MA				1	-		
	10 00 9 2		8 25 8 2		3 20 7 0		Lv FRANKENMUTH Ar SOMMERS	3.90 6	55 7 50		12 48 5	40 7 4	0 8 5 0 8 4	8 9 4	3		
	10 10 9 3 10 18 9 3	8 9 15	8 35 6 3 8 41 6 4	1 1 31	3 30 7 10 3 36 7 1	6 5.08	FRANKENMUTH JUT	8 OE 8	22 7 94	7 34	12 26 B	34 7 3 26 7 2	9 8 3	5 9 3	0		
	10 23 9 4 10 45 10 1 12 00 10 3	0 9 45	8 46 6 4 9 10 7 1	0 2 10	9 15 7 5	0 13.90	An FLINT	.00	6 18	7 10 6 15	12 05 5 11 55 4	29 6 2	9 7 5	5 8 2	9	-	
† Daily except Sun	12 00 10 3	1 10 37	Saturda	y and S	Bunday		Daily except Saturday a	nd Sun	day.		§ Sund	ay on	ly.				



AMB

Stations and										T A A	_	∎t-Cl		ıla	1114	1220						on, st	Bepten	ling Time Table No ober 22, 1918.
	29	27		173	23	169	21	165	19	161	17	157	15	153	13	151		9	7	5	3			Stations and
Sidings	Daily F.M.	Daily P. M.		Dully T. M.	Daily P. M.	Dally St. M.	Dally P. M.	Stally P. M.	Daily P. M.	Dally P. M.	Dally A. M.	Daily & M.	Delly A. M.	Only	Dally A. M.	Daily	, ,		Sunday Only		Daily		Distant from Justin	Sidings
#ACKSON Lv.	11 20	9 20		774	5 30	J74 6 96	3 25	170 8 85	1 25	105	11 25	11 05	9 25	256 8 86	7 30	7 65		8 15					.00	I.w. JACKSON
COOLEY PARK	11 30	9 32		7 21	5 42	5 15	3 37	3 15	1 37	1 15	11 37	11 15	9 37	9 15	7 41	7 15		5 28					1.68	COOLEY PARK
WOODVILLE	11 33	9 35		7 23	5 48	5 17	3 40	3 17	1 40	1 17	11 40	11 17	9 40	9 17	7 44	7 17		6 29					2.93	WOODVILLE
BANDSTONE	11 41	9 43		7 97	5 57	5 21	3 45	3 21	1 48	1 21	11 48	11 21	9 48	9 21	7 51	7 21		5 36					6.15	BANDSTONE
CHAPEL	11 45	9 48		7 30	6 04	5 24	3 54,	3 24	1 54	1 24	11 56	11 24	9 54	9 24	7 57	7 24		5 41					8.13	CHAPEL
PAICKA	11 50	9 85		7 38	0 12	5 30	4 01	3 30	2 01	1 30	12 01	11 30	10 01	9 30	1 86	7 30		5 46.					10.45	PARMA
KOULH CONCOUR	11 55	10 02		7 40	6 19	5 34	4 08	3 34	2 08	1 34	12 08	11 34	. 10 08	9 34	8 19	7 34		5 55					13.40	MORTH CONCOR
BATH HILLS	12 01	10 09		7 44	6.24		4 16	3 30	2 16	1 38	12 16		10 16	9 38 .	8 20	7 33		6 02					17.04	BATH MULES
MURDOCK	12 02			7 45	6 28		4 17	3 39	2 17	1 39	12 17	11 39	10 17	9.39	129	7 39		8 04		A. M.			18.06	MURDOCK
ALMON		10 15		P40		5 43		3 43	a 170 2 22	1 43	12 22	11 43	10 72	9 42	8 27	7 64		6 09		5 10			19.52	ALBION
	-												-									_	1000	
AUSTIN AVE.	A. M.	16 32		7 53	6 38	5 48	4 26	3 48	2 28	1 16 1 48	12 28	11 44	10 28	0.40	8 33	7 48		6 14		5 15			20 40	AUSTIN AVE.
SHOPS		10 25		7 55	6 41	5 51	4 32	3 50	2 32		12 32		10 32	9 50	8 36	7 50		6 17		5 18			21.47	BHOP8
EMERTS	1	10 29		7 58	6 48	5 56	4 37	3 53	2 37	1 53	12 37		10 37	9 53	8 40	7 53		6 23		5 22			23.58	EMERYS
MARKENGO		10 32			6 50	5 56	4 42	3 55	2 42	1 55	12 42	11 55	10 42	8 55	8 44	7 55		6 28		5 25			25.49	MARKENGO
GRAHAM		10 38		8 00	6 54	5 56	4 47	3 57	2 42		12 47	11 55	10 42	9 57	5 48	7 50		0 20		5 29			27.27	GRAHAM
BICE CREEK		10 35		8 02 8 05	9 58	5 91		174 4 80	2 62	2 00	12 52	105	10 47		8 52	130 0 00		6 33		5 33			29.27	RICE CREEK
MARKHALL		10 45			7 05		4 59	4 06	2 59		12 59		10 52		8 59			6 46	r .	6 40				MARSHALL
DICKEAS 4 24 WYJORHYTT				8 11		6 07																	31 28	
BERILLI 110 DICKERS		.10 48		8 15	7 09	6 11	5 03	6 10	3 03	2 10	1 03	12 104	11 03	10 10	9 03	8 10		6 51		5 44			32.22	DICKEYS
		10 52		8 18	7 15	6 14	6 04	6 13	9 84	2 13	1 08	12 13	ા છે	10 13	9 08	8 13		6 28		5 49			34,32	BENTLEY 14 CERESCO
CEREBOO 161 WARRENS		10 56		8 21	7 21	6 17	5 15	4 18	3 15	2 16	1 15	12 16			9 15	8 16		7 08		5 55			37 00	WARRENS
WARRENS 101 POOLE		11 00		8 33	7 25	6 19	5 19	4 18	3 19	2 18	1 19		1 19		9 19	8 18		7 14		5 59			38.52	WARRENS POOLE
CORN FLAKES		11 04		B 25	7 33	8 21	5 24	4 20	3 24	2 20	1 24			10 20				7 20		8 04			40,54	
CORN PLAKES		11 09		5 29	7 34	6 25	5 27	4 24	3 27	2 24	1 27	12 24	11 27	10 24	9 27	8 24		7 25	A. M.	6 00	A. H.		42,01	CORN FLAKES
BATTLE CREEK		11 23		8 45	7 60	CH.	6 43	1 1 38	8 45	2 38	1 43	12 38	111748	10 38	114	1 22 2 24		7 43	6 23	6 23	5 15		43,88	BATTLE CRESS
COUNTRY CLUB	l	12 80		9 00	8 05	6 53	6 00	4 53	4 00	2 53	2 00			10 53				8 00	6 40	. 6 40	5 27		45 79	COUNTRY CLUT
URBANDALE		11 42		9 95	8 09	6 56	6 S4	4 56	* 4 04	2 56	2 04	12 56	12 04	10 58	18 04	8 56		8 94	B 44	6 44	5 31		46.85	URBANDALE
PIHLAY		11 48		9 11	8 16	7 01	6 12	6 80	4 12	3 00	2 12	1 90	12 12	11 90	10 12	, 17h		8 12	8 50	8 50	5 37		69.33	PINLAT
3.54	1	1											1						156	130				£.14
COLEMAN		11 55		9 16	8 22	7 07	6 19	5 05	4 19	3 05	2 19	1 05		11 05				8 19	8 58	6.28	5 43 a B		51 59	COLEMAN
GULL LAKE JOY.		12 80		9 20	8 26	7 10	6 24	5 09	4 24	3 09	2 24		12 24		10 24			8 24	7 01	7 01	6 47		53.52	GULL LAKE JCT
AUGUSTA		12 04		9 24	8 29	7 13	6 27	5 13	4 27	3 13	2 27		12 27	11 13				8 27	7 05	7 05	5 50		54 07	AUGUSTA
BULETT		12 08		9 28	8 34	7 17	6 33	6 17	4 33	3 17	2 33		12 33					8 33	7 11	7 11	5 54		55 94	HULETT
GADESSURG (Sdg)		. 12 13		9 33	E 30	7 22	6 41	5 22	4 41	3 22	2741		12 41	11 22				8 91	7 18	7 18	6 00		58 70	GALESBURG (8d)
GALESBURG		13 14		9 34	8 41	7 23	6 42	5 23	4 42	3 23	2 42		12 42	11 23				8 42	7 20		6 01		59 00	GALESBURG
COUNTY PARM		. 13 19		9 30	8 46	7 27	0 48	6 28			2 48		12 48			8 28		8 48	7 28	7 20	6 05		60.57	COUNTY FAILM
PIERCE		12 23		9 42	8 51	7 30	6 55	5 29	4 55		2 55	1 29	12 55	11 29				8 55	7 32	7 32	6 11		62 95 l	PIERCE
COMPTOCE		12 24		9 44	8 53	7 32	6 57	5 30	4 57	3 30	2 57	1 30	°12 57	11 30	10 57			8 87	7 34	7 34	6 13		62.83	COMBLOCK
TOUNG		. 12 29		9.48	8 58	7 35	7 02	5 34	5 02	3 34	3 02	1 34	1 03	11 34	11 02			9 02	7 39	7 39	6 18		85,31	TOUNG
C. E. A S. TARDS		12 33		9 kt	9 03	7.39	7 07	5 37	S 97	3 37	3 07	1 37	1 117	11 37	11 87	9 37		8 07	7 43	7 43	6 23		86.30	C. E. A.S. YARD
GAR BARN	1	12 34		8 52	9 04	7 40	7 09	5 38	5 09	3 38	3 09	1 35	1 09	11 38	11 09	9.38		8 09	7 44	7 44	6 24		96.79	CAR DARN
RALAMANOO AP		12 45		10 05	9 15	116	7 20	5 50	5 20	3 50	3 20	1 50	1 20	11 50	11 20	9 80		9 20	7 55	7 55	8 35		68.58	Ar. WALAMAZOO
		A. H.	-	P. M.	PR	PM	P.M	P M.	P. M.	P M.	P. M	P. M.	г м	A H'	A. M	A. M.		A. M	A M	A M.	A. M.			
	-			Delle	Bully	Delitr	Duth	Debly	Delby	Dally	Deltr	Deltr	Delly	Dollar	Delly	Delle		Delly	Sunday	Dally Buospi fonday	Delle			
	29	27	-	173	23	169	21	165	19	164		157		153	13	151		9	Only 7	5	3			

Eastbound						1	Ka	lar	na		D 1 nt-Cl		J	ck	082	TA.					Sunday	Augui	No. 18, faking effect 10, 1919, at 3:10 g Time Table No. er 22, 1918.
Stations and	. 1		4	6	8	 158	12	162	14	166 Limited	16	170	18	174	20	176	22	24	178 Local	28		30	Stations
Sidings	Distance from Xuisan		Daily Except Sunday A. M.	Banday Only A. M.	Dally A. M.	Dalty A. M	Datty M. M.	Dalir A. M.	Dully P M.	Daily P. M.	Dally P. M.	Daily P M.	Dutly P. M.	Pally P. H.	Daily P. M.	P M.	19ally 2°, 34,	Dally	P. M.	Dedly A. M.		Daily	Sidings
JACKSON Ar.	68.58		€ 35	6 35	8 38	153 8 85	10 50	187 18 55	12 50	12 66	2 50	2 84	4 50	4°55	6 50	n.	8 43		11 05	12 55			Ar. JACKSON
COOLEY PARK	66.90		6 24	6 24	8 28	8 45	10 38	10 47	12 38	12 47	2 38	2 47	4 38	4 47	6 38	8 47	B 32		10 57	12 46			COOLEY PAR
WOODVILLE	65.65		6 20	6 20	8 23	8 43	10 34	10 45	12 34	12 45	2 34	2 45	4 34	4 45	6 34	8 45	8 28		10 55	12 43			MOODALTTE
BANDSTONE	62.43		6 13	5 12	8 16	8 39	10 26	10 41	12 26	12 41	2 26	2 41	4 26	4 41	6 25	6 41	8 21		10 50	12 38			SANDSTONE
CHAPEL	60.45		6 02	5 07	8 11	8 36	10 20	10 38	12 20	12 38	2 20	2 38	4 20	4 38	6 19	6 38	8 15		10 46	12 34			CHAPEL
PARMA	58 13		6 01	6 01	0 83	8 32	10 14	10 34	12 14	12 34	2 14	2 34	4 14	4 34	6 12	6 34	8 08		10 42	12 29			PARMA
NORTH CONCORD	55 18		5 55	6 55	7 59	8 27	10 88		12 88	12 30	2 04	2 30	4 08	4 30	6 06	6 30	8 02		10 37	12 24			NORTH CONCO
BATH MILLS	51,54		5 48	5 48	7 52	8 23	10 00	10 28	12 00	12 28	2 00	2 26	4 00	4 26	5 59	8 20 8 20	7 55			12 19			BATH MILLS
MURDOCK	50.52			0.70	7 50	13 6 22	9 58	10 25				2 25	3 58	4 25	5 58	6 25	7 54		10 30	12 18			MURDOCK
MURDOCK 1.44 ALBION			5 46	5 46	# 151 7 44						1 58	4 2 22		0 20 4 22		6 22			10 28	12 14			ALBION
ALBION	49.08		5 48	5 42 A. W	7 44	 8 19	9 53	16 22	11 53	12 22	1 53	2 22	3 53	4 22	5 53	6 22	/ 48		10 28	12 14			
AUSTIN AVE.	46 18	,	5 37		7 39	8 15	153 8 48	10 17	157	12 17	161 1 48	2 17	185 3 48	4 17	169 5 48	6 17	7 43		10 22	12 09			AUSTIN AVE.
SHOPS	47.11		5 34		7 36	8 13	9 44	10 14	11 44	12 14	1 44	2 14	3 44	4 14	5 44	6 15	7 40		10 20	12 06			EEOP8
EMERYS	45.00		5 29		7 31	8 10	9 39	10 11	11 39	12 11	1 39	2 11	3 39	9 11	5 39	6 12	7 35		10 15	12 02			EMERYS
MARENGO	43.09		5 25		7 27	8 07	9.34	10 08	11 34	12 08	1.34	2 06	3 34	4 08	5 34	6 09	7 30		10 10	11 59			MARENGO
GRAHAM	41.31		5 20		7 21	5 04	9 29	10 05	11 29	12 05	1 29	2 05	3 29	4 05	5 29	6 06	7 26		10 06	11 55		1	GRAHAM
RICE CREEK	39.31		5 15		7 16	8 00	9 24	10 00	11 24	12 90	1 24	2 00	3 24	4 00	5 24	0 01	7 21		10 02	11 61			RICE CREEK
MARSHALL	37 30		5 00		7 09	7 54	9 16	9 54	11 16	11 54	1 16	1 54	9 16	3 54	5 16	8 54	7 13	1	9 55	11 45		1	MARSHALL
DICKEYS			0 40													5 50	92		9 51				DICKEYS
	36 36		5 04		7 04	7 50	9 12	9 50	11 12	11 50	1 12	1 50	3 12	3 50	5 12 21		7 80			11 41			
DENTLEY	34 26		5 00		6 60	7.47	9 08	9 47	11 08	11 47	1 08	1 47	3 09	3 47	5 08	5 47	7 04		9 47	11 36			BENTLEY
CERESCO WALLENS	31 58		4 55		6 53	7 44	9 02	9 144	11 02	11 44	1 02	1 44	3 02	3 44	5 02	5 44	6 58		9 44	11 30			CRERESOO
WAITHENS POOLE	30.06		4 52		6 49	7 42	8 57	9 42	10 57	11 42	12 57	1 42	2 57	3 42	4 57	5 42	6 53		9 41	11 25			WARRENS POOLE
	28.04		4 48		6 45	7 40	8 52	9 40	10 52	11 40	12 52	1 40	2 52	3 40	4 52	5 40	6 48		9 38	11 20]	
CORN FLAKES	26.57		4 44		6 40	7.36	8 47	9 36		11 35	12 47	1 36	2 47		4 47	5 36	6 43	P M.	9 35	11 15		A. M.	CORN PLAKES
BATTLE CREEK	24.70		4 30 A M	ļ	8 26	7 28	8 25	9 28	16 25	11 29	12 28	1 20	2 25	3 20	4 25	6 20	8 26	7 45	9 20	11 00		12 35	BATTLE CREE
COUNTRY CLUB	22 79				6 10	7 07	8 09	9 07	10 09	11 07	12 09	1 07	2 03	3 07	4 09	5 07	8 09	7 31	9 09	10 50		12 18	COUNTRY CLU
URBANDALE	21,73				8 05	7 04	8 94	9 04	10 04	11 04	12 04	1 04	2 2 84	3 04	4 04	5 04	6 04	7 27	9 05	10 46		12 15	URBANDALE
FINLAY	19.25				6 58	7 00	7 58	0.00	9 56	11 00	11 56	1 00	1 56	3 00	3 56	6 80	5 58	7 20	9 00	10 40		12 10	PINLAY
COLEMAN	16,99				5 51	6 SI	7 51	8 58	9 51	10 56	11 51	12 56	1 51	2 56	3 51	4 56	5 51	7 14	8 56	10 35		12 05	COLEMAN
GULL LAKE JCT.	15.05				* 5 47	6 52	7 47	B 52	9 47	10 52	11 47	12 52	1 47	2 52	3 47	4 52	5 47	7 10	8 52	10 30 .	1	12 00	GULL LAKE JOY
AUGUSTA	14.51				5 43	6 49	7 43	8 49	9 43	10 49	11 43	12 49	1 43	2 49	3 43	4 49	5 43	7 07	8 48	10 27		11 56	AUGUSTA
HULETT	12.64				5 38	8 45	7 38	8 45	9.35	10 45	11 38	12 45	1 38	2 45	3 38	4 45	5 38	7 02		10 22		11 52	HULEUT
(ALESBURG (Sdg)	9.68				5 30	6 41	7 31	8 41	9 31	10 41	11 31	12 41	1 31	2 41	3 31	4°41	5 31	6 56		10 16		11 47	GALESBURG (SA
GALESSUTE (Sug)	9.58					8 40	7 31	8 40	9 33	10 40	11 31	12 40	1 30	2 40	3 30	4 40	5 30	8 55	8 38 '	10 15		11 48	QALESBURG
COUNTY PARM					5 31				9 30 151 9 26	10 40	11 30 157 11 28	12 40	1 30 1 26	2 40	3 30 3 20	4 36	300 6 26	21 6 48		10 10		11 42	COUNTY FARM
COUNTY PARM PIERCE	8.01				5 27	6 36	7 26	8 36												10 10		11 47	PIERCE
	5 63				5 22	6 32	7 19	8 32	9 19	10 32	11 19	12 32	1 19	2 32	3 19	4 32	5 19	6 42					OOMSTOCK
COMSTOCK	4,75				8 20	6 30	7 17	8 30	9 17	10 30	11 17	12 30	1 17	2 30	3 17	4 30	5 17	6 40		10 03		11 35	
YOUNG	3.27				5 18	6 26	7 12	9 28	9 12	10 26	11 12	12 26	1 12	2 28	3 12	4 28	5 12	8 34	8 22	9 58		11 30	C. E. A S. YARD
C., K. & S. YARDS	2,09				5 12	6 28	7 07	8 23	6 07	10 23	11 17	15 83	1 07	2 23	3 87	4 23	5 97	0 29	8 17	Ø 81		11 26	
CAR BARN	1.79				5 11	6 22	7 06	8 22	9 06	10 22	11 06	12 22	1 05	2 22	3 06	4 22	5 08	6 28	8 16	9 49		11 25	CAR BARN
KALANAZOO Ly.	.00				5 00	6 10	8 55	8 10	8 55	10 10	10 55	12 10	12 55	2 10	2 55	6 10	4 55	8 15	\$ 06	9 35			LY. KALAMAZOO
			Datte	Sunday	A.M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	25.36	27. ML	2.36	P. M.	P. M.		P. H.	
			Encept	Only	Deltr	Dally	Delly	Delly	Dally	Dells	Dulty	Dally	Dully	Delly	Shally	Dally	Dully	Dally	Dully	Delly		Dally	

#16 8-10-19



Operating timetables used by employes of Michigan Railway were issued by divisions, each appearing on a separate sheet of sufficient size to meet the needs of the branch involved.

Michigan United Railway had issued the tables of all electric divisions in bound form.

Excerpts shown here are identified by number and date of issue.

Photo left: MURy car #43 on Main Street, Albion, with snow shoveling crew, circa 1908.

All items: AHS



BATTLE
CREEK..

Looking west at Monument Circle

..circa 1925.

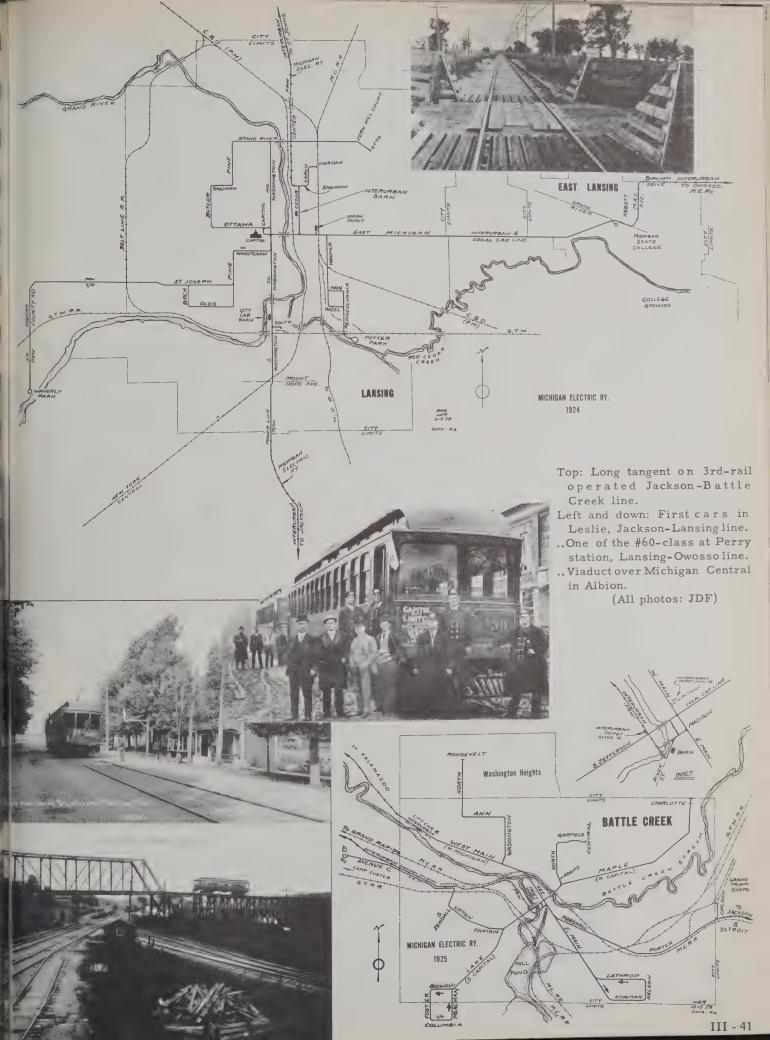
GPC

At corner of Main &
Jefferson....car 418
at the right.

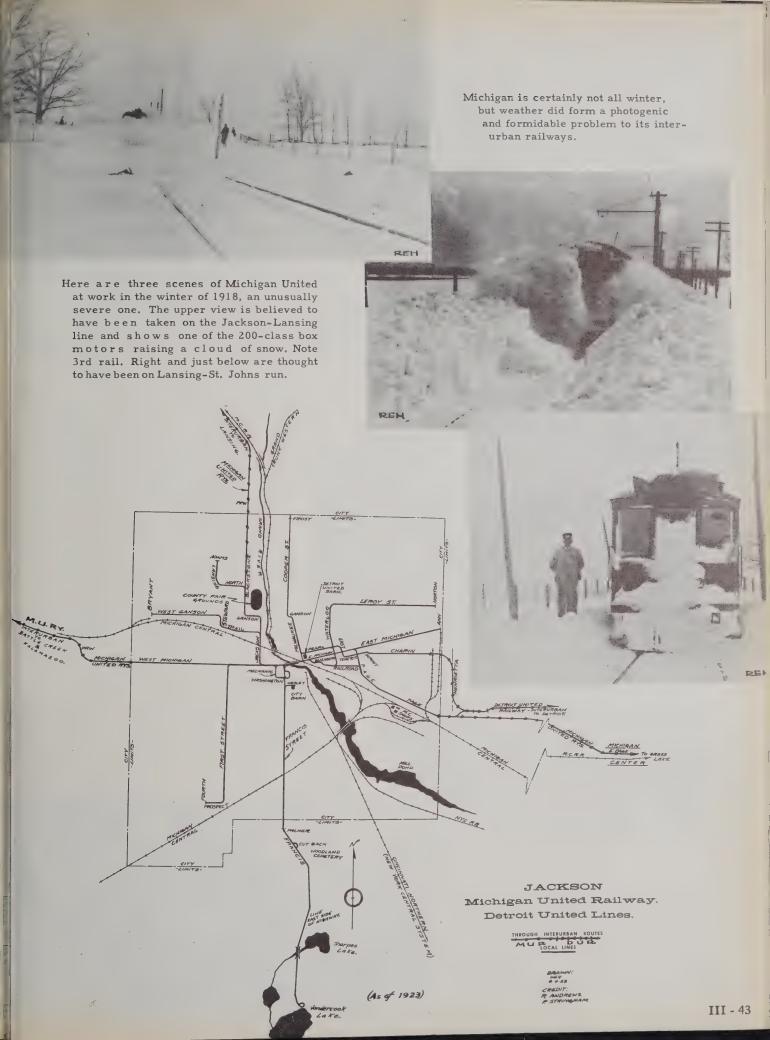
May 10, 1915.

At left: very early animal traction operations of Battle Creek railway in 1885.

STR





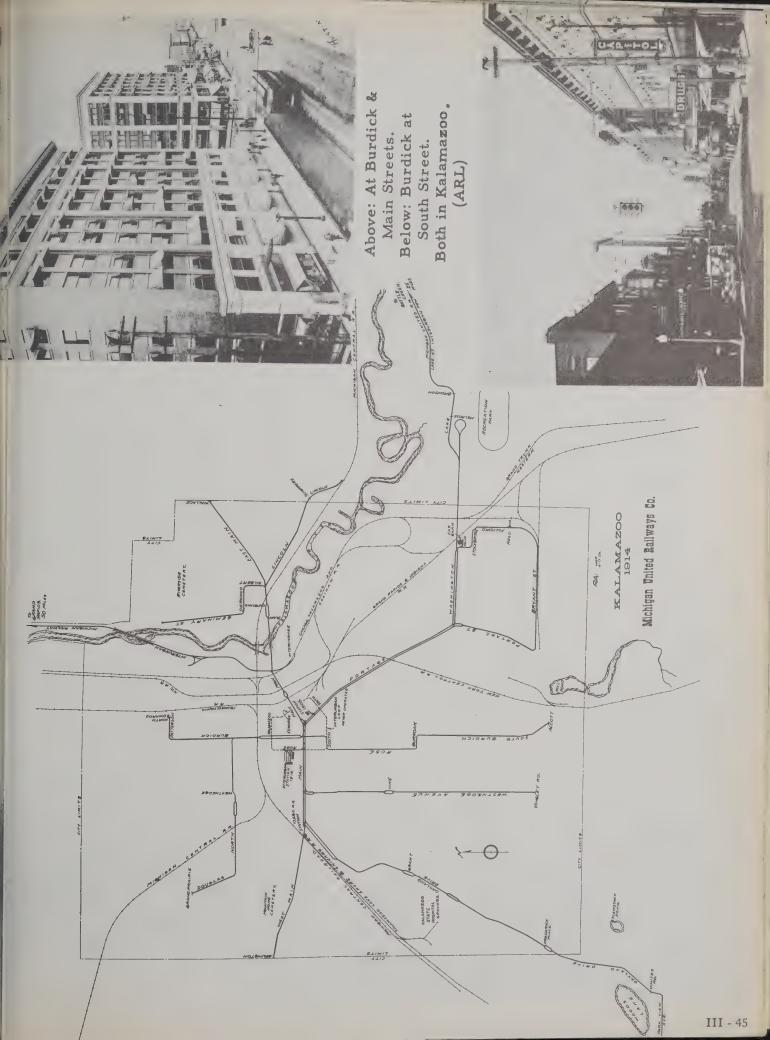






The Jackson fleet included 500class city cars and suburban
equipment operated on the
Wolf Lake-Grass Lake branch
line. Above left are scenes
taken in final months when operation was under Jackson
Transportation Company.
Below is car #47 on Wolf Lake
run and at bottom is car acquired from Interurban
Railway & Terminal (Cincinnati, Ohio) in one-man service between Jackson and
Michigan Center, on Wolf

Lake line.









Immediately above: Scene on E. Michigan line with car #632 scooting by.

To the right: Looking north on Washington

To the right: Looking north on Washington street with car #615 in foreground.





Left: Looking west on Michigan St. toward the State Capitol at Lansing.



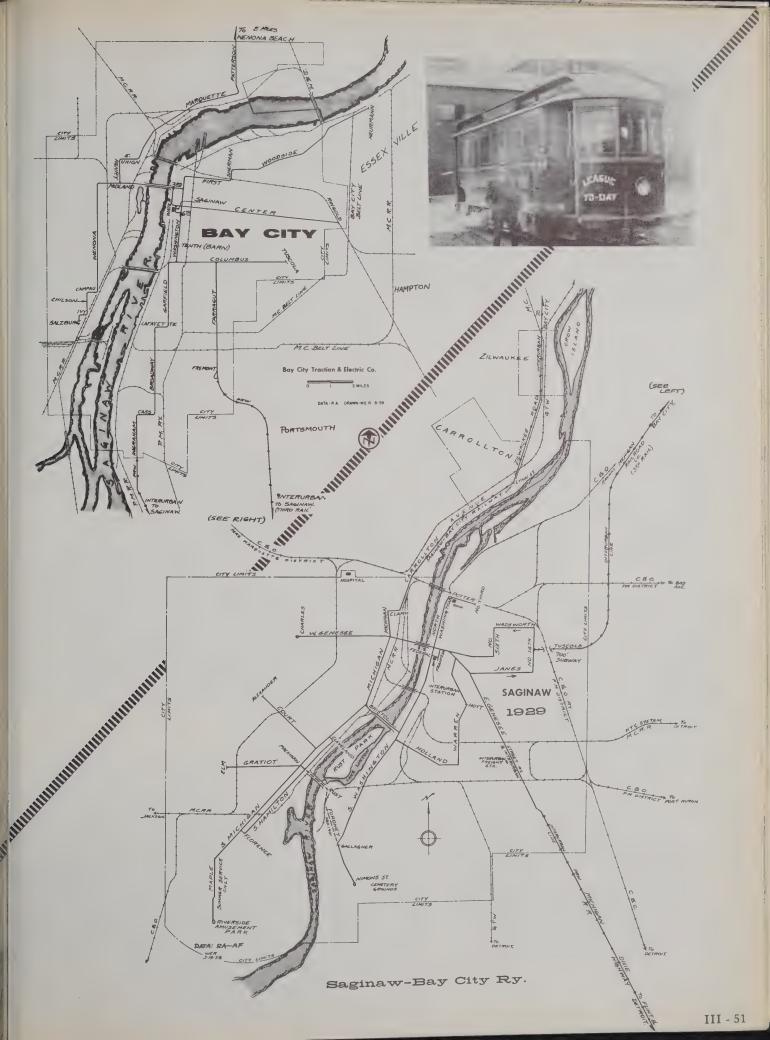
The 1915 period brought both two-motor and four-motor versions of the arch roof St. Louis car shown above. Interior is #528, exterior is #627. Right is #613. All were used in Lansing.





The Michigan Electric system had really three basic types of city cars. The 1910 model is pictured center above as car 657, a Brill job with a body style commonly thought of as being built by St. Louis Car Company. Above and below it are the Birney types, with and without rear door, which came about the first World War time. Top car is #241, bottom is #646. Between these two types were a group of flat arch roof, 10-window cars.



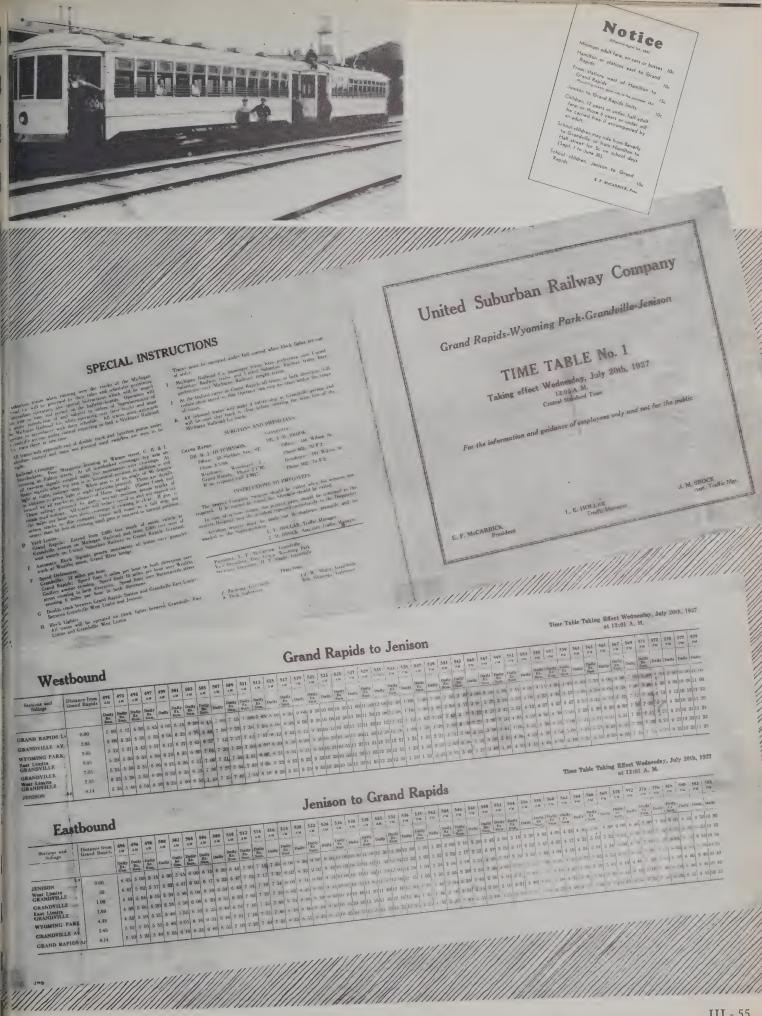


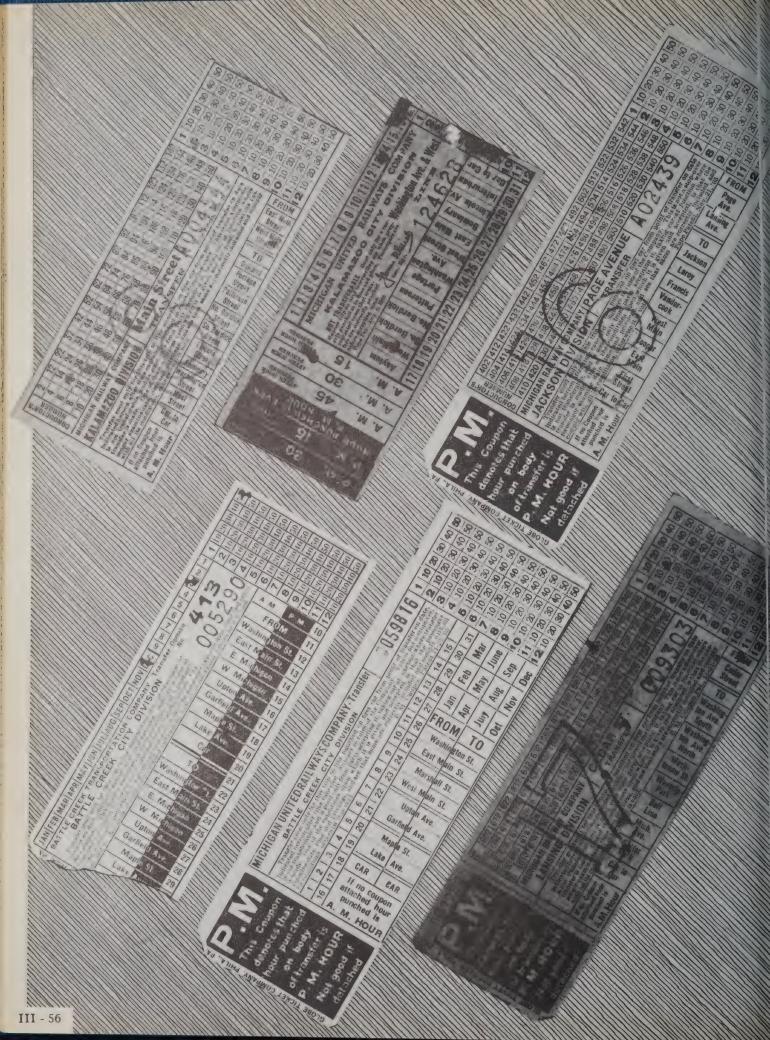




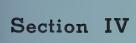
ville. Then down the page are #102, single truck open; #250, single truck closed, and #107, double truck open, all three of the Saginaw system.







AREAS COVERED



Other lines in LOWER peninsula

CONTENTS:

- 1-6 Toledo-Adrian
- 1-2 Adrian
- 7 Toledo-Ottawa Beach
- 8 Toledo-Petersburg
- 8-9 Flatrock-Dearborn
- 10 Cheboygan
- 10 Fenton
- 11 University of Michigan
 - (Ann Arbor)
- 11 Western Michigan University (Kalamazoo)
- 12 St. Joseph-South Bend
- 13-17 St. Joseph-Benton Harbor
- 18-23 Grand Rapids
- 24-26 Muskegon
- 27-34 Grand Rapids-Muskegon
- 35-36 Manistee
- A supplemental color plate of Southern Michigan Railway car #301 is inserted facing page 12.



TOLEDO-ADRIAN:

Altho it was primarily an Ohio line, the onefourth of the Toledo & Western Railway that operated in the state of Michigan outlasted everything else in that state that had been classed as interurban.

Construction of the road began in 1900. Track from West Toledo nine miles to Sylvania, Ohio, was completed and in operation by March, 1901. The line to Adrian, Michigan, was completed as far as the Wabash Railway tracks on the edge of town in December of the same year. An underpass under the Wabash was completed in 1903, permitting entry to the center of town over the local street car company's tracks. The main line of the T&W was built west from Allen Junction, reaching Fayette, Ohio, in 1902, and its terminus in Pioneer in 1903. At one point the main line veered north across the Ohio line into Michigan, to serve the town of Morenci. A plan to continue westward from Pioneer to contact the St. Joseph Valley Railway at Columbia, Ohio, was never achieved, altho some grading westward was done.

T&W served a drained swamp that had been bypassed by the main line railroads. Accordingly, the company was without competition for freight traffic, and for lack of passenger business in the lightly populated area, built up an important traffic in agricultural products, especially sugar beets. Two freight trains were operated daily as early as 1902. In order to tap the territory, the Wabash, Detroit Toledo & Ironton and Toledo Terminal Railroad were willing to interchange with T&W and thus the road was able to avoid the general boycott of the interurbans by the railroads.

Another unusual feature of T&W service was the Railway Post Office included in some of its passenger cars.

A structural oddity was the group of three identical bridges over the Raisin River at Blissfield, Michigan. Two bridges had been built, one for the New York Central Railroad and one for the highway, when T&W laid down the third, thus here one could view three forms of transport on identical bridges side by side.

Because of the low tributary population the road was initially unsuccessful, failed and was sold in 1906 to owners affiliated with the Everett-Moore syndicate. With several other properties, the road passed to the Cities Service group, under Henry L. Doherty, in 1913. T&W again went bankrupt in 1921 and was reorganized and sold to the Willys-Overland Motor Company and the Wabash Railway in 1924.

Altho light weight one-man cars were bought for the passenger service, T&W thereafter was mainly devoted to hauling Willys automobiles from Fitch Yard at Toledo to an interchange with the Wabash at Adrian. This traffic reached about 13,000 cars per year by the late 1920s, and constituted about 83% of the road's traffic.

Neither of the owners was interested in the passenger business and the trackage rights into downtown were given up in 1925. Passenger service was abandoned altogether on July 1, 1933, when the U.S. Mail contract expired. LCL freight service was also abandoned in 1933.

In that fateful year the auto traffic, declining with the sagging fortunes of Willys-Overland, ceased altogether. Since most of the agricultural traffic had already been lost to trucks, the owners decided to abandon the road. Toledo & Western received the necessary permission to abandon from Allen Junction to Pioneer in 1933. Two local companies continued operating much of this line with gasoline locomotives under the names Ohio & Morenci Railroad and Pioneer & Fayette Railroad. In 1935 T&W abandoned the Adrian-Toledo line, but again $12\frac{1}{2}$ miles out of Adrian to Riga were preserved, this time by the Blissfield Railroad, an affiliate of Ohio & Morenci. Electric power was used until September, 1936, when the village of Blissfield ordered the road to repair its tracks in the street. Being unable to afford this, it abandoned all save 1.7 miles bought by O&M for gasoline operation.

Even these isolated segments have now all been abandoned, except for about $\frac{1}{2}$ mile of track at Franklin Junction, still used for switching to the Wabash Railroad.

ADRIAN:

The Adrian City Electric Belt Line Railway Company began to operate in 1889. The first three cars were equipped with a double-axle truck at one end and a single-axle at the other. The double-axle truck was equipped with one motor which was geared thru a countershaft to one pair of wheels. The second pair of wheels in this truck was connected to the first, locomotive-like, with a pair of connecting rods. The experiment was unsuccessful, as the connecting road proved too rigid. These 16-footers were replaced with new cars in 1891.

In this year the line was shut down by a receivership. This was repeated in 1897, but the line reopened in 1898 and was kept going only on the strength of a rumor that an interurban railway being built from Toledo would use its tracks. The interurban, the Toledo & Western Railway, was completed and took over the city line in 1907.

Cities Service Company took control in 1913 and brought some semblance of efficiency to the line. Fare boxes appeared. Fares had climbed from the traditional nickel to 10¢, 3 for 20¢. One-man operation began in 1918. In 1921 the line's management was separated from Toledo & Western, presumable to pave the way for abandonment of the city line without involving the interurban. On June 28, 1924 the last street car ran in Adrian and three weeks later track removal started.



Toledo & Western made a very early into the freight field. It had acquired the locomotive shown at right by 1903, when this photo was taken in the Sylvania yards.





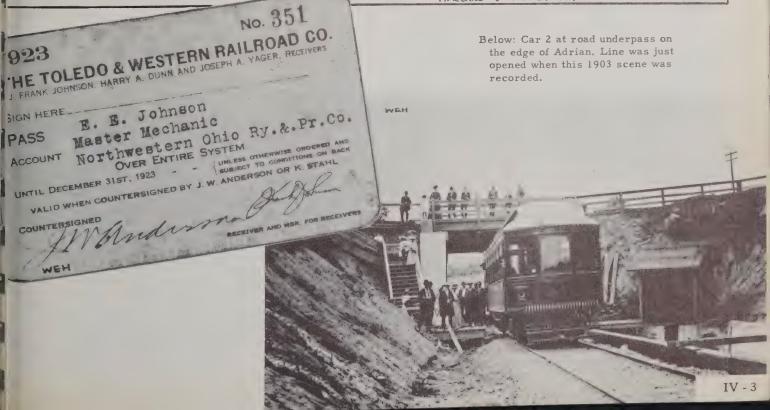
Adrian was one of the smaller cities of this country to have a local street railway system. The high number (#82) and style of car indicate possible original ownership by either Toledo or Cleveland.

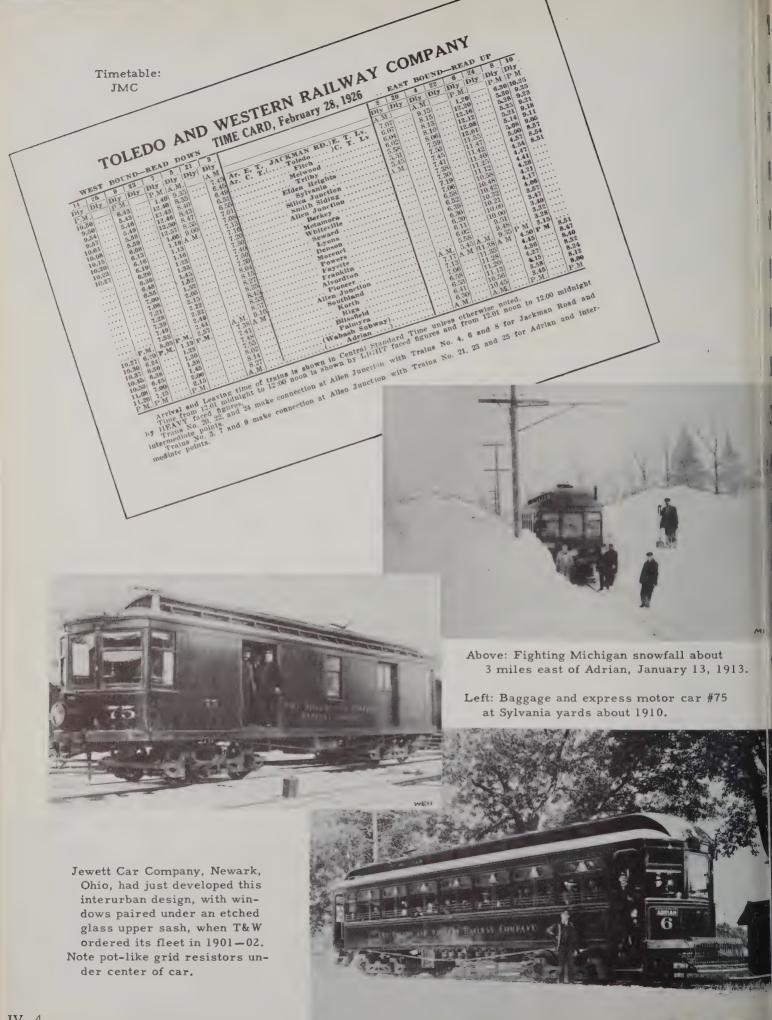


In addition to the Adrian branch, which was almost entirely within the state of Michigan, T&W served that state at Morenci, where its main line made a curious deflection across the Indiana-Michigan state line.

Left: Car 7 at Morenci, about 1910.

WEST BOUND—READ DOWN TIME CARD EAST BOUND—READ UP												
21 19 19-17 59 15 57 55 13 11 53 51 49 9 7 5	7 71 45 8 43 41 Train Numbers 40 42 2 44 46	70 4 6 8 48 80 53 10 54 56 12 58 14 16 18										
P.M. P.M. P.M. P.M. P.M. P.M. P.M. P.M.	M	A.M. Neer, P.M. P.M. P.M. P.M. P.M. P.M. P.M. P.M										
10 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 34 Bekey A 7 48 Metamodis 8 00 Sevent 8 10 E Lymn 8 27 E Metamodis 8 35 Fyste 8 35 Fyste 8 35 Fyste 9 4 3 Arvortice 9 5 7 Arvortice 9 6 7 9 10 Ploneer	7 10 0 0.55 4.88 0 64 7 7.90 10 55 4.88 0 64 1 7.90 10 55 4 8.8 0 64 1 7.90 10 55 1 8.0 1										
10 355 5 20 12 20 12 70 12 70 12 70 12 70 12 77 12 7	7 - 66	7, 16 9, 56 2, 55 8 14 7, 7, 99 9, 94 9, 2, 48 8 8 0, 07 7, 02 9, 94 2, 2, 48 8 8 0, 07 8, 69 8 4 8 8 8 0, 07 8, 69 8 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8										
IMPORTANT All trains daily except as etherwise noted. Light type—A. M. Heavy type—H. Daily except Sundays and Holidays, and Holidays, and the day time, give motorman notice by STANDING OUTSIDE of rail and swinging arms. AT the days preceding holidays. NIGHT, DISPLAY A LIGHT. It no other light is available, strike a match. EASTERN TIME SHOWN FOR TRAINS BETWEEN SYL- VANIA AND TOLEDO. Holidays under this Time Card are New Years, Decoration Day, Fourth of July, Labor Day, Thanksgiving and Christmas. All trains daily except as etherwise noted. Light type—A. M. Heavy type—H. Daily except Sundays and Holidays, and the day time, give motorman and Finence. The point between Am at Spivania with Train No. 10 for model by STANDING OUTSIDE of rail and swinging and swinging noted. In the point between Am at Spivania with Train No. 10 for match in the point of the point in the poi												
	TIMECARD	of JAN. 27, 1924 JRM										





TOLEDO & WESTERN RY.

		_		1			_				R.C. A.
CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF	BATA: WEH REMARKS
PASSENGER	CARS										
1	Jewett	101	Peckham	4W68	1GEK6	48650	46	45' 0"			Dah. 124 A. CO. Tan.
2	н	11	11	н	н	11	11	11			Rebuilt to 60 1914. Adrian Div.
3	п	102	н	4LS34	1LS44	53450	60	491 4"			" " 6] " • Mail Car.
4	п	11	ft	n	11	53400	60	11			" " 59 1910. Wrecked 2/15/08 in W. Toledo by Big Four passenger train.
5	н	11	11	11	н	54800	1	11			
6	II.	- 11	"	11	11	56500	60	11			Rebuilt to 58 1911.
7	11	11	11	11	n	57300	60	н			Retired in 1925.
8	11	11	11	11	11	56800	60	"			
21	Cincinnati	121									Rebuilt to 57 1911.
22	"	1.51	Cincinnati	"	# #	28100	41				Later used as bonder car,
	п	11	11			28100		"			
23		+	1	11	H	28100	36	11			
29	Jewett	101	Peckham		2GEK6	54900	40	42' 6"			Rebuilt to 56 1910.
30	Thomson	n	ii ii	11	H	59000	40	421 01			" " 50 1906. Purch. 'Ol from Victory Park Ry.
41	Houston	192	, , , , , , , , , , , , , , , , , , , ,	Trail			80	381 0"			Open car pulled by 29 & 30.
42	11	11		11			80	11			н
43	H	11		17			80	н			II II
45	Toledo		Peckham	2W68	1LS38		40	45' 0"			Purch. from Manhattan El Lines '05. Rebuilt to freight motor 1906. (74)
50	Ry & Lt	111	Baldwin	4AC302	lAC51	59900	46	541 61			RPO rebuilt from old 50 (Ex 30)
51	Jewett	101	11	4W68	IGE-K6	46600	30	451 01			Later rebuilt to line car.
52	0	101	Dorner	4LS34	1LS44	54100	42	49! 4"			
52	Toledo Ry. & Lt.	111	Baldwin	4AC302	1AC51	56500	42	491 4"			Rebuilt from above car.
53	Niles	105	Dorner	4LS34	1LS64	56300	46	51' 5"			Wrecked 1926.
54	11	105	Baldwin	4GE57	IW-KI4	61000	45	541 01			
55	н	105	tt.	4GE57	11	59650	45	541 9"			
56	Toledo Ry. & Lt.	10	Dorner	4LS34	91	54900	46	541 6"			Rebuilt from car 29.
57	11	'11		4AC302	1AC51	56800	46				" " 8.
58	н	'11	11	11	11	54800		491 4"			 " " 5,
59	11	10	Dorner	4LS34	1W-K14	53450	46				" 3.
60	II	114	Baldwin	4W318	2W-HL	70000		56' 0"			n n 1.
60	ıt	126	n n	#	8	70000	32				Rebuilt into RPO from above car and used on Pioneer Div. until '33 aband.
61	"	114	11	11	н	69000		561 0"			Rebuilt from car 2.
	п		54	11	n			561 0"			Same as "Remarks" for RPO car 60
61		126	"			69000	32	56, 0.			Jame as Remarks for Nio Car Co
EDETOUT FO		1	ł								
FREIGHT EQ								45.4 00			Rebuilt into freight motor from no.45.
			Peckham	2W68	1LS38			45' 0"			Freight motor - made trailer in '20s.
75	Jewett	101	11	4W68	GEK6	48000		45' 0"			" " "
76	Toledo	101	11	61	10	48000		45' 0"			" " Rebuilt after
76	Ry. & Lt.	114	Baldwin	4AC302	2AC51	60000		50' 0"			collision with DTI at Denison, Ohio,
77	Jewett	102		4W68	GEK6	54000		49' 4"			Freight motor.
78	Kuhlman	112	Baldwin	4AC302	2AC51	60575		501 0"			" sold to T&I (#54). Later
80	Brill	115	Standard	4W318	2W-HL	87000		50' 0"			acq. by Gaylord Contnr. Bogalusa, La.
Α	Tol. & West.	102	Diamond	2Walkr	LS38			221 9"			Line Car. Also used as switcher " " sold to Spfld Sub (#10). Acq.
100	11	128	Baldwin	4GE57	2K14	61000		40 4"			147 for caboose by Ohio & Morenci #25.
101	п	128	Peckham	Trail	none			34 ' 0"			Snow plow. Sold to Ohio & Morenci #7.
102		105	н	4 L934	LS64	100000		34 ' 0"			 Rotary snow plow. Orig. no. 251
103	F M Pease	101	Dorner	4LS34	LS64	75000		34 1 0"			Steeple cab locomotive. (Org 403)
104	11	101	Pachen	91	н	75000		34 1 0"			" (Org. 404)
200-202	Tol. & West.	01	Archbar	Trail	none	26300		321 0"			Portable sub. Sold to T&I 1934.
X-2	, н -	н	11	11	11			11			н п
251	Peckham	91	Peckham	11	10			34 '-0"			Snow Plow Sold in 1912
501								19'0			Weed burner (Da ta unknown)

Toledo & Western - continued

CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF	REMARKS
FREIGHT	EQUIPMENT (CONT	'D.)									
400	Tol. & West.	102	Curtiss	4LS34	1LS64	70000					Locomotive
400	11		Dorner	4AC303	2AC52						Rebuilt from above loco.
401	"	105	н	4W76	2K15	100000					Locomotive
401	0		If	4AC303	2AC52						Rebuilt from above loco.
402	11	107	Baldwin								Locomotive
402	11		Baldwin	4AC303	2AC52						Rebuilt from above locomotive Sold to Springfield Sub. R.R.
403	Baldwin Westinghouse	115	11		2W-HL	122000					Loco sold to T&I (#80). Later acq by Toledo Edison (#3).
404	General Elec.	126	American Loco.	4GE251	2GE C83H	120000					Loco sold to a rolling mill in Schnectady, New York.
405	Baldwin Westinghouse	128		4W 562D5	2W-HL	100000					Loco sold to Youngstown & Sub.#101.
405	Baldwin		0								4-4-0 steam loco. ex Wabash RR sc 'll
											Code:
											DTI - Detroit Toledo & Ironton
											TRI - Toledo & Indiana
											,

HOUGHTON COUNTY TRACTION CO.

CAR	BUILDER	BUILT	TRUCKS	MOTORS	CONTROL	BRAKE	SEATS	LENGTH	WIDTH	HEIGHT OVER ROOF	PINION		except for Additional no	
													SPEED (mph)	COMPLETE PRICE
3 (see)	Brill	01	Brill 21E	2GE67	K=10	Hand					15/69	9	25	\$3505.50
5	90	101	39	2GE67	K-10	98					15/69	,	£ 25 ·	3505,50
6	Laconia	100	Peck.14B3	4GE67	C-6	Axle Drive	40	39'0"			22/62		32	7085.00
7	Brill	01	Brill 21E	2GE67	K+10	Hand	32	30'0"			15/69	4	25	3505.50
8	Laconia	00	Peck.14B3	4GE67	C-6	Axle Drive	40	3910"			22/62		32	7085.00
9	Brill	101	Brill 21E	2GE67	K-10	Hand	32	30 ' 0"			15/69	+	25	3505.50
10	Laconia	100	Peck.14B3	4GE67	K=6	Axle Drive	40	39'0"		i	22/62		32	6235.00
12	11	100	**	4GE67	19	99	10	28			99		32	6235.00
14	11	101	98	10	60	Motor Drive	99	11			W		32	6235.00
16	91	101	44	11	C-6	W	91	92			w		32	7085.00
18	н	101	10	91	и п	Axle Drive	11	"			**		32	7085.00
20	07	101	н	11	K=6	11	н	11			91	1	32	6235.00
22 (I)	Kuhlman	101	Brill 27G	М	C=6	п	"	40'6"			11		32	7185.00
24	**	101	19	91	19	10	"	15			**		32	7185.00
26	60	'01	11	91	**	11	11	11			10		32	7185.00
28	10	101	11	11	10	**	11	"				_	32	7185.00
30	н	103	11	11	н	11	"	"			11	\dashv	32	7185.00
32	М	103	**	н	11	21	17	11			10	\dashv	32	7185.00
34	11	103	н	10	21	17	"	11			11		32	7185.00
even nos. 36-48	99	108-	91	4GE80	K-28J	Motor Drive	42	4219"	81-2"	12'-0"			Except car 46	1105.00
22 (II)	Co. Shops		11	4GE67	11	11	56	44 '4"	0 =2	12.50			Rebuilt from ca	rs #3 and #5 to repla
SNOW PLOW I	FOUTPMENT			-				FAN	FAN		l		Tirst car #22	a/c destroyed by fire
1	Taunton		Taunton	2GE67	K=10	Hand		CONTROL	INDIONS.		15/69		÷ 20	0505 00
2	и		H	*	W 10	nano					13/69			2595.80
3			н	N	11						N .		20	2595,80
4	99	103	н	4GE57	2K-14	Motor Drive						-	40	2595.80
5	Ruggles Rotary	103	Peck.14B6	#GEST	11 II	Hand.		2K-11	OCES			-	20	6325,52
6	NOCALY	100	Peck. ST	2GE57	2K-11	nand.			2GE57		10		20	
	No		der 'BRAKE'				Moto	1R-17	refer to	type of d		1 001	* 20	3845.00

TOLEDO-OTTAWA BEACH:

Toledo Beach (originally Ottawa Beach), a resort 17 miles north of Toledo, Ohio but across the Michigan state line, was to be served by an electric railway incorporated in 1905. Under the name Toledo Ottawa Beach & Southern Railway, the new line, sponsored by the Toledo traction interests, was to run from Point Place, Ohio, to the Beach.

Construction was rather difficult as the line crossed several streams including the Ottawa River and some marshes. In 1906 the Beach Line and the Toledo & Point Place Interurban Railway (another Toledo system component) were merged into the Toledo Ottawa Beach & Northern. In the next year the Toledo Railway & Light Company leased the road and began development of a park at the Beach. It was planned to extend the road north to Trenton, but this idea was dropped after Detroit Monroe & Toledo got its paralleling project into operation.

The Ottawa Beach road was single track with long passing sidings for the first few miles out of Point Place, then double-track the rest of the way to a loop terminal north of the Beach. North of the Ohio-Michigan state line, the road had a spur track connecting with the Detroit & Toledo Shore Line (steam) Railroad.

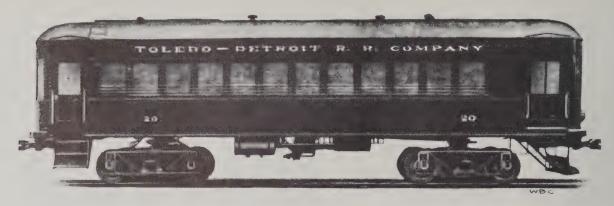
TOB&N owned only one car, #998, a box motor used to haul ice, pop and supplies to the Beach. Passenger cars were leased from the Toledo lines. Usually the 540-560 series cars were used as they had heavy duty motors, air whistles, marker and head lights suitable for interurban service.

A side track at the Beach permitted the parking of private cars of the various electric railway systems, as well as of special trains.

In 1924 cars from the recently abandoned Maumee Valley Traction line were assigned to the Beach line, giving it its first real interurban cars. However, declining patronage, accelerated by the completion of a paralleling highway, made the road hopeless and it was abandoned on October 17, 1927.



In the history of the Detroit Toledo & Ironton Railroad there were two ventures into the electric railway field. The earliest was planned along the lines of an interurban railway, the Toledo-Petersburg line....the second was a heavy main line electrification out of Dearborn.



TOLEDO-PETERSBURG: (by Geo. W. Hilton)

One of the several stillborn projects of the boom years of interurban building was a line from Toledo to Ann Arbor. In 1905, the Toledo Ann Arbor & Detroit Railroad got construction under way, grading a right-of-way from Sylvania Avenue, Toledo, thru Petersburg, Dundee and Milan to a point about three miles south of Ann Arbor. The company arranged for entry into Ann Arbor over the ''Ypsi-Ann'' interurban.

Track was laid from Toledo for about 17 miles to a point about two miles south of Petersburg. Seven miles of line poles were erected. Abutments for every bridge but one were placed, and the walls of the power house at Petersburg were completed to within a few feet of the roof when the construction company failed.

Efforts to complete the line as an interurban were unsuccessful, largely because the panic of

1907 occurred. The line changed hands in 1911 1912 and finally, the Toledo Ann Arbor & Jackson Railroad began to operate the line on July 1, 1913, using a 4-4-0 type steam locomotive and an old railroad coach.

In 1915, the company was reincorporated as the Toledo Detroit Railroad and track was extended to Dundee. A pair of interurban type combination baggage-passenger cars were bought from Niles in expectation of hauling them behind locomotives on the line and operating them by trolley in the streets of Toledo. There is no evidence that this arrangement was ever executed, and it is certain that the road itself was never operated electrically. The Niles cars were sold to the Northwestern Pennsylvania Railway, an interurban between Erie and Meadville, Pennsylvania. The tracks were taken over by DT&I.

FORDSON - FLAT ROCK:

To distribute the production of model T Fords rolling off the assembly lines at Dearborn, Henry Ford in the early 1920s acquired the Detroit, Toledo & Ironton Railroad Company. Alot of traffic that had been going to other railroads right at Dearborn or coming directly from them there was rerouted to move via DT&I to and from junctions south of the Detroit area in Michigan and Ohio. While this increased the volume handled by the road, its profit balance did not improve too substantially.

In 1925 it was decided to see whether operations could be improved thru electrification of 17 miles of line between Fordson and Flat Rock, Michigan. A total of 50 track miles was equipped with a 22,000 v 25 cycle AC system with catenary trolley distribution to pantograph collectors on the locomotives.

Catenary bridges were made of reinforced concrete. Steel U-bars formed a core and molds were built to form the concrete around the bars. The parts of the arches were fabricated at the Fordson plant and carried out on the line to be erected. Grouting was used to cover joints, nuts and bolts in the assembled structures.

Electric operation for revenue freight traffic began in 1926 with one locomotive, 501A-501B, which could actually be separated into two operable units. As a complete unit, it developed 4200 hp thru 16 motors operating at 600 v DC, fed from motor-generator sets carried in the box cabs. Max speed was 35 mph and total weight on drivers was 340 tons.

Plans for extension of the electrification to cover the entire road to Ironton, Ohio, were interrupted when Ford shut down his plant to change over to the model A. Ford then accepted an offer from Pennroad Corporation, on behalf of the Pennsylvania Railroad, to purchase the entire road. Soon Ford was routing its freight via the various alternates and the importance of Dearborn to the DT&I began to decline.

In view of this situation, the electrification became an expensive luxury without economic justification., so it was abandoned in 1929. The handsome concrete arches still stand along the line right past Ford's historical museum, Greenfield Village, as a monument to an idea that didn't quite come to fruition.



Out at work, at left is half of Detroit Toledo & Ironton's one electric locomotive. Taken May 4, 1926.

Right: Motor 501 B-501 A poses at commencement of the test.
July 29, 1925.

Left: Aerial view of the Flat Rock yard, Nov. 13, 1926.

Architectural beauty of reinforced concrete catenary bridges is effectively depicted in the view right of DT&I-Michigan Central crossing.

September 30, 1927.

All: JSI



FENTON:

The town of Fenton, east of Owosso and south of Flint, boasted a horse car line, but on this little information has been unearthed. Judging from the photo, the line connected this small town with adjacent Long Lake at Eddy's Landing. It is said to have lasted until about 1916, altho it does not appear in traction directories of this period.

(Photo: WJC)

horse car line from the McArthur Boat Dock south on Main Street. Branches were built to the Michigan Central Depot and to the saw mill district of Duncan City.

Two cars were used originally, a third was added later. In winter, runners were substituted for the wheels, and the cars became sleighs.

The line shut down in 1896 due to financial difficulties. Charles Howell reopened the road in 1898, but with no better success. Operations ended finally in September of that year.





UNIVERSITY OF MICHIGAN RAILWAY:

A line of railway, for many years electrified, diverges from the Michigan Central Railroad main line in a southwesterly direction, a short distance east of Ann Arbor station.

This is the little half-mile line of the University of Michigan, between its power plant and the New York Central System freight yards.

The line, as an electric railway, had two purposes: It handled coal into, and ashes out of, the power plant; and, it was a rolling laboratory for students of railway engineering.

In its latter capacity, national transit attention was focussed on this diminutive electric railway in the 1930s when it was used to test mechanical developments for the President's Conference Committee, then designing the "PCC" car.

C. F. Hirshfield, head of the research department of Detroit Edison, was selected by the committee to develop the car, and it was to the University of Michigan that he carried his problems. An experimental truck was built and control equipment was developed to operate it. Fitted with a platform for standing passengers, it was learned by getting the "car" to full speed and then braking it as rapidly as possible, what rate of acceleration and deceleration could be com-

fortably used without throwing passengers. Sound deadening methods were tried. Seating, lighting, and many other details that were to become part of the PCC car were checked out on this tiny line of the U. of M.

The line's regular rolling stock consisted of one steeple cab locomotive, an ancient gondola, and some flat cars. Two trestles carried the line over East Washington and Glen Drive.

The steeple-cab made use of a unique method of current pickup. The rails were not grounded, but there were two trolley wires. Instead of a trolley pole, the locomotive had two European type bow collectors. To avoid shorting at turnouts, one bow was lowered and a third rail thru these areas provided current return. Where tracks ran alongside a building, a special third rail supported from the building wall provided the return. A special arm lowered from the locomotive engaged this rail. Thus, three different and unusual methods of current pickup were used to operate a line less than a half-mile long.

In 1949 the line was de-electrified and a surplus Plymouth gasoline locomotive was obtained for motive power. The steeple-cab was sold to the Warwick Railway in Rhode Island.

WESTERN MICHIGAN U., Kalamazoo:

Michigan's only example of the inclined cable railway was opened in 1908 to provide transportation up to the campus of the Western Michigan University at Kalamazoo for students living on the foot of the hill to the east. Each car had four

7-seat benches and was built with the passing side closed and the outer side opened for boarding and alighting. The cable was propelled by an electric motor located in a small brick building at the upper end of the incline.

No fare was charged for the use of this University facility. However, freshman student hazing traditionally included the sale of "trolley ride tickets" by upperclassmen. The frosh caught on when they got tired of climbing up the hill and waiting for the non-existent tickets to be delivered.

By 1947 it became evident that expensive repairs would be needed to keep the line in operation. As the expansion of the University had taken place mainly to the west on the high plateau, the incline was deemed no longer necessary and so abandonment was ordered.



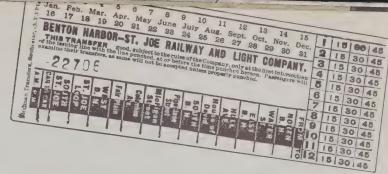
BENTON HARBOR-ST. JOE:

Transit in the twin cities of Benton Harbor and St. Joseph began with a horse car line between the two. The line was electrified in 1892. It was expanded with routes to Fairplain, South St. Joseph and to the House of David.

In 1900 the company became known as the Benton Harbor & St. Joseph Railway & Light Company. In a few years the road began two interurban routes. A line was opened to Eau Claire in 1906 and reached Dowagiac in 1911. A second line was built in 1910 to Watervliet with a branch from Coloma to Paw Paw Lake over Pere Marquette Railway track. The Paw Paw Lake branch connected with a branch of the Kalamazoo Lake Shore & Chicago Railway, extending from Toquin on that line. This had been built when the latter road was under Michigan Railway lease and there were hopes of extending its control over the Benton Harbor road.

The Graham & Morton steamship line from Chicago to Benton Harbor provided a valuable connection for passenger interchange both for the city and interurban lines.

In addition to the usual interurban freight and merchandise service, the steamship connection permitted a unique operation hauling the produce of Michigan's "Fruit Belt". Cars were placed at sidings along the line, loaded during the day (smaller shipments were placed in shelter sheds along the line) to be picked up by fruit trains leaving Watervliet at 4:30 PM or Dowagiac at 4:15 PM. These trains reached Benton Harbor in time to transfer their loads to the 8:00 PM Chicago boat, for ultimate delivery to the Chicago market the next morning.



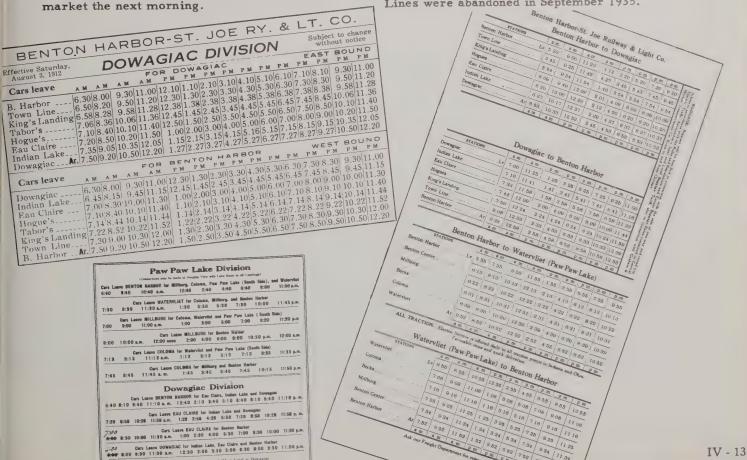
The company was bound with a single franchise for both railway and electric power service, and the public got the feeling that rail losses were hidden in high electric rates. A separate franchise was therefore given the railway in 1924 as a result of a paving wrangle with Benton Harbor.

In 1928 the property was sold to Illinois interests as the Twin City Railway. The interurban routes were abandoned on August 31, 1928, four days after the takeover.

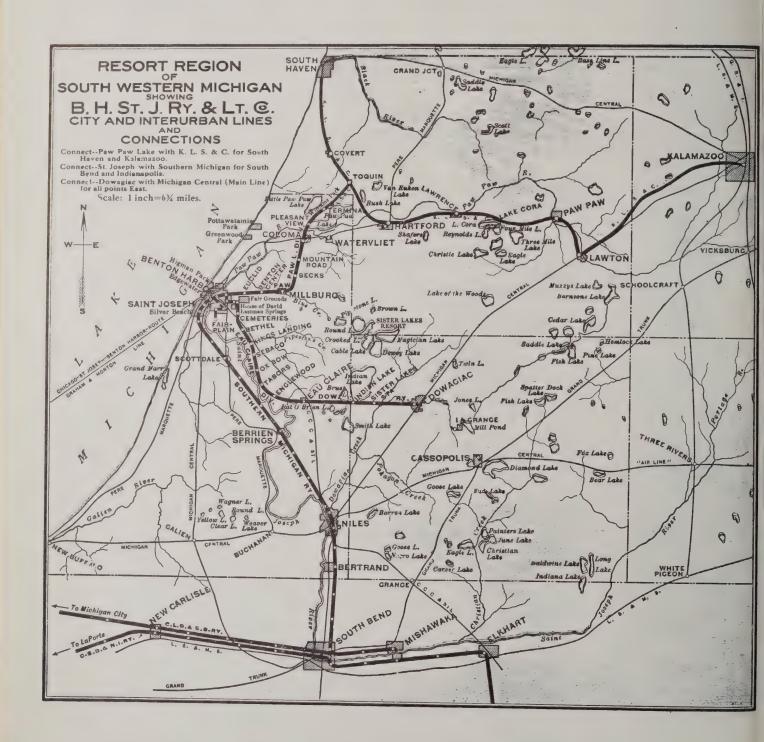
In 1929 the Hull Avenue route in Benton Harbor was abandoned and in that year the system showed a small profit for the first time in some years. During the early 1930s four routes were in daily operation except when blocked by heavy winter snows.

In 1935 the company ran afoul of the National Recovery Administration (a depression-born federal authority) "Blue Eagle". They had failed to comply with the designated minimum wage for the industry of 40¢ per hour, which they claimed they couldn't afford.

The franchise in St. Joseph expired in that year and the company indicated no desire to renew. They actually kept going without a franchise until a bus franchise could be worked out. This accomplished, the rail operations of the Twin City Lines were abandoned in September 1935.







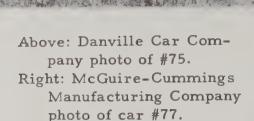


Benton Harbor -- St. Joe Railway bought its interurban cars in lots of two at a time. Lower photo shows type built in 1910 by Danville Car Company, 46'-0" in length, 8'-8" wide, double-end.

Upper photo shows type built following year by McGuire-Cummings to similar dimensions.

Interurban car #71, built by American Car Company, coming in from Eau Claire, circa 1906.







help handle the crowds of busy summer weekends. The interurban also had some former elevated railway wooden cars, both motor and trailer. Largest type of car
for city service was
the double-trucker
shown left. Early
revamped for oneman operation, this
type was once used
on the interurban
lines to

SPRING SCHEDULE Effective Saturday, June 3, 1916

SPRING SCHEDULE Effective Saturday, June 3, 1916

BENTON HARBOR -ST. JOE RAILWAY AND LIGHT CO.

BENTON HARBOR -ST. JOE RAILWAY AND LIGHT CO.

Service blowers and Colomb.

Service blowers and Waterviet and Paw Paw Lake (North Side)

Time shown in black haves service blowers Dection Harbor and Waterviet and Paw Paw Lake (North Side)

Time shown in red shows service between Dection Harbor and Waterviet and Paw Paw Lake (North Side)

Time shown in red shows service between 1 and Waterviet and Paw Paw Lake (North Side)

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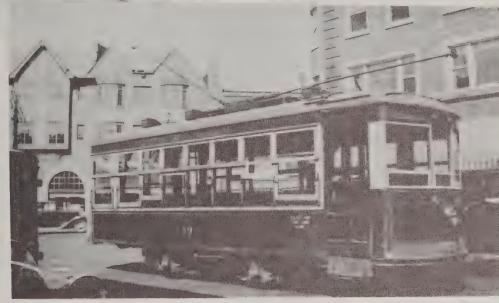
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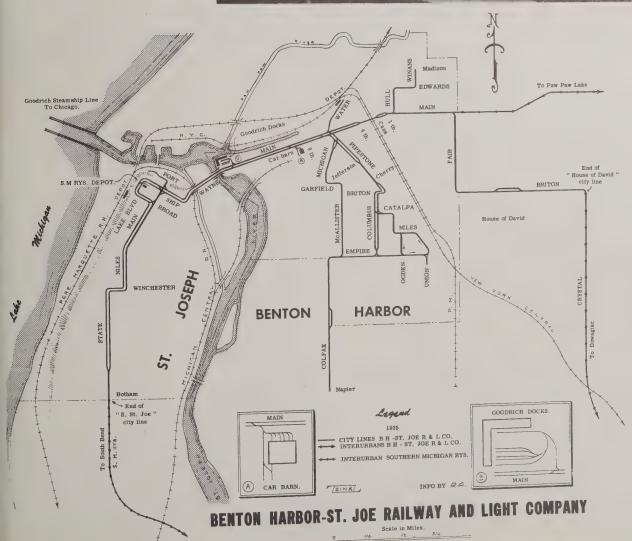
Cars L



Left: #16 at House of David, 1933.

Right: #19 at
Main near Niles,
St. Joseph.







GRAND RAPIDS:

The "Furniture City's" first horse car line began operation in 1864 over a two-mile route on Monroe and Fulton Streets. In 1875 the Reeds Lake Railroad was built to link that lake with downtown. Horse cars proved inadequate and shortly after the line was started it changed to steam train operation. In 1885 all the companies which had sprung up in the city were merged into the Street Railway Company of Grand Rapids, a combine of 120 cars and 500 horses.

The year 1885 also saw the introduction of cable cars here by the Valley City Gable Railway, inspired by the success of the Clay Street line in San Francisco, California.

By 1890 it was evident that traffic in Grand Rapids would not support the investment of cable lines and, in fact, that the street railways in this city were greatly overbuilt. By 1891 all operations were merged under the head of the former cable company. After the merger a line was built out Hall Street to the new carbarns at Lafayette. This line had to be discontinued for lack of patronage after only 78 days of operation. One by one the cable lines were converted to electric traction, thus bringing to a close the existence of Michigan's only cable street railway.

Under the circumstances it is easy to appreciate that street railways here were not profitable, althothere were a few fair years. In 1909, for example, the company handled nearly 21 million passengers and netted more than \$300 thousand. At that time it operated 63 miles of track, with 124 passenger motor cars, 15 trailers, 3 mail cars and 11 service cars. An important source of revenue was the rental of trackage

rights to the Grand Rapids Grand Haven & Muskegon Railway whose interurban cars reached its downtown terminal via the street car company's tracks. At one time the Holland interurban cars also used their tracks, but they were switched to private right-of-way about 1916.

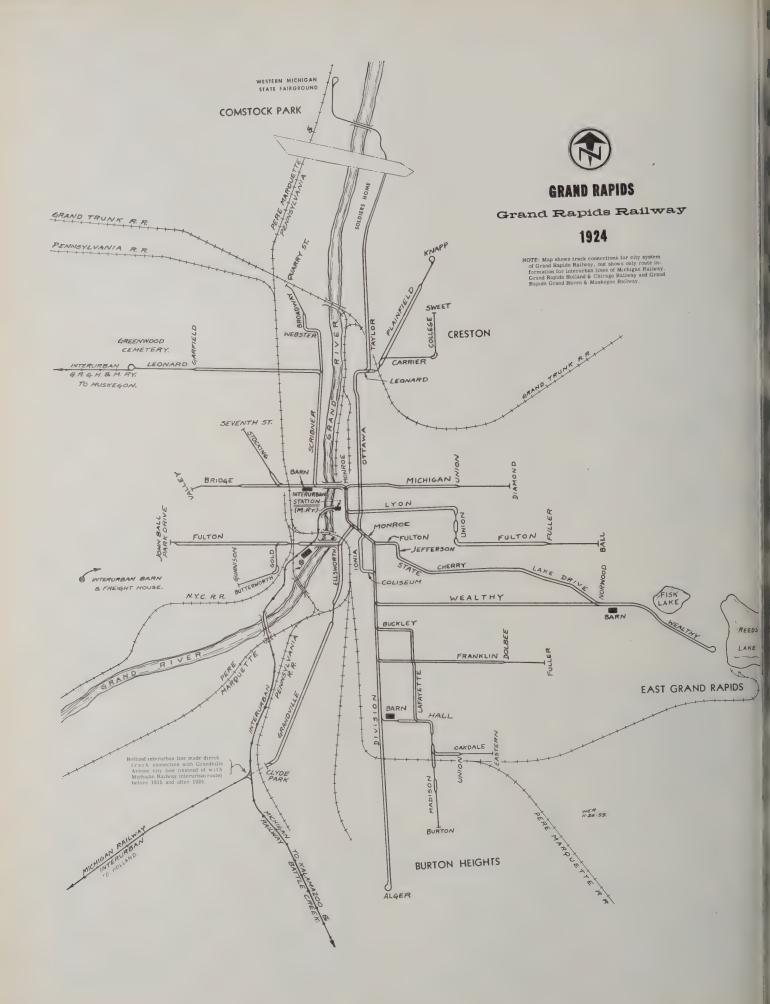
In 1920 a city commission was appointed to study street railway conditions in view of the expiration of the franchise the following year. The franchise ran out before the studies were completed but operations continued uninterrupted. An ordinance regulating jitney operation was passed to protect the railway and, in 1922, a new franchise was granted providing service at cost.

First bus operations began over outlying routes in May, 1923. On July 18, 1924, the Hall Street barn was completely destroyed by a fire which broke out at 3:30 AM. By almost superhuman effort, the company was able to provide service on headways only two minutes wider than normal when service began about five hours later. Cars were borrowed from Muskegon and Saginaw to fill out the fleet.

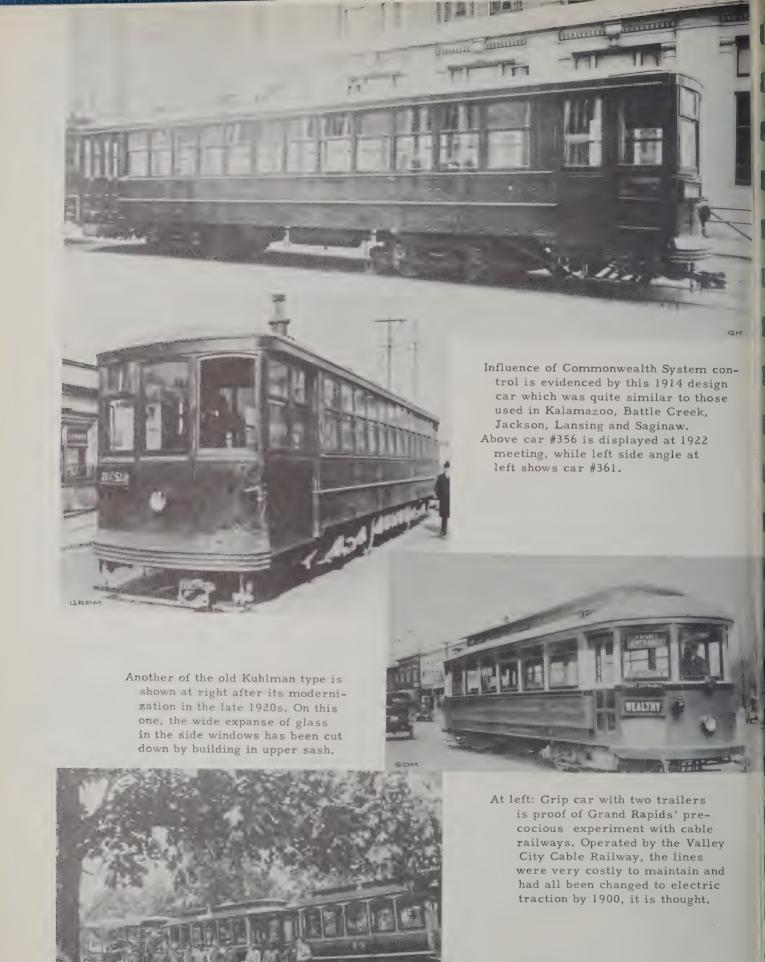
Before ordering new cars, the company decided to hold competitive trials of samples from three car builders. Brill's Kuhlman plant sent the "Ohio", St. Louis Car Company sent "St. Louis", and Light-Weight Noiseless Electric Street Car Company furnished the "Minnesota".

With a fine publicity splurge the cars were presented to the public. Ultimately an order for 27 cars was placed with St. Louis and the new equipment went into operation in September 1926. Revenue on lines using these cars showed a 2.5% increase against a slight drop on the rest of the system.

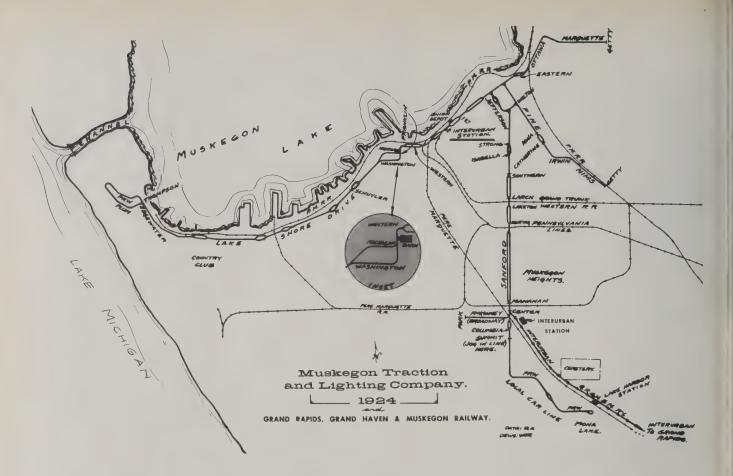












MUSKEGON:

The Muskegon Street Railway ran its first horse cars on November 25, 1882. After a few years the company switched to mules, believing that they were better for long hauls. In April of 1890 electric street railway service began and shortly thereafter extensions were made to Lake Michigan Park and to Muskegon Heights.

The original franchise was granted for a 30-year term expiring in 1912. The company had been bought at foreclosure by the Muskegon Traction & Lighting Company in 1897. This was a subsidiary of the American Light & Traction Company which, as a large utility holding company, had little in the way of good will. The company tried to raise fares in Muskegon, but could not get permission. After 1912, they operated on a day-to-day basis instead of a franchise and contended that, since they had no franchise the company had no obligation to the city regarding fares.

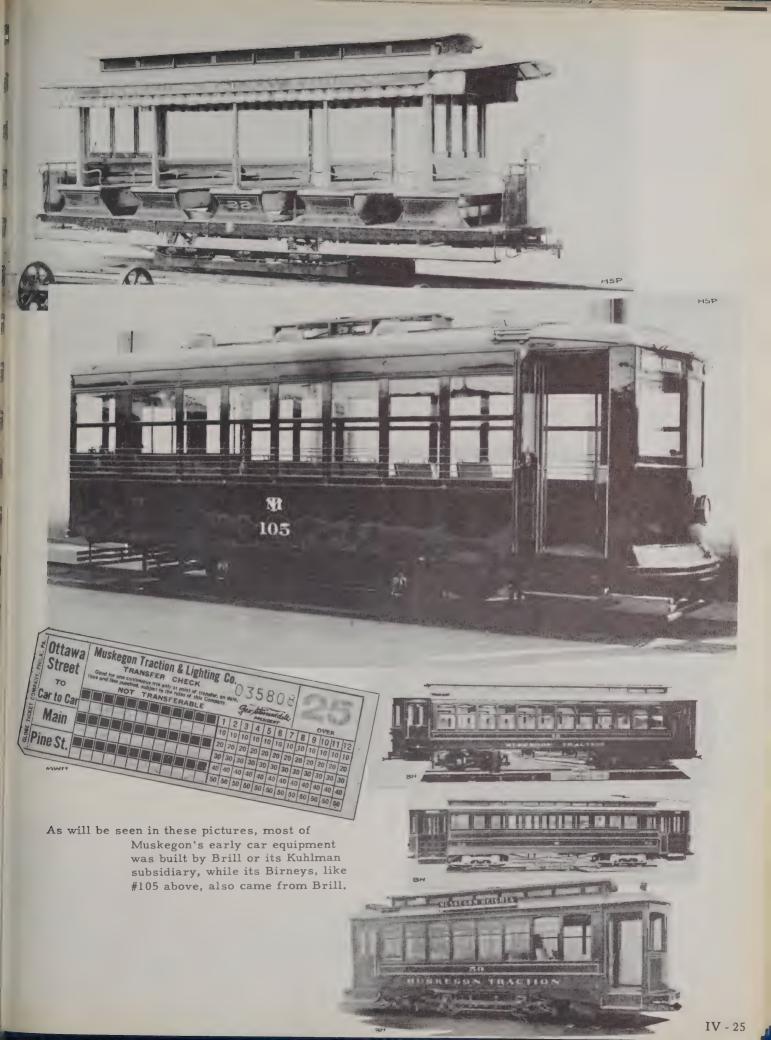
In August 1919 the company announced that the fare would be raised from 6¢ to 7¢. About 6:00 PM a group of workmen who boarded a trailer offered the conductor 6¢. Told the fare was now 7¢, they refused to pay the additional penny or to leave the car. The trailer was pulled into a siding and left standing. Crowds soon gathered and blocked the street.

At the moment of this riot, by some quirk of fate the city council was voting a new franchise. Next morning the city awoke to find every artery blocked by wreckage of street cars as the citi-

zens wearily walked to work. Service was slowly resumed and by 1921 relations had so improved that in a vote on jitneys versus cars, the cars won by a 4 to 1 majority.

Beginning in 1922 profits were made for a few years and in 1925 a fleet of new double-truck birneys was placed in service. However, the trend reversed in 1927 and 1928 and service by street car was ended on October 10, 1929.







GRAND RAPIDS-MUSKEGON:

The Grand Rapids Grand Haven & Muskegon Railway Company, incorporated in 1899, served those cities with an interconnecting ribbon of some 44 miles of electric railway. This was one of the first roads in the United States to use the third-rail system of power distribution, operating at 600 v DC.

Its main line ran from Grand Rapids, via Berlin and Fruitport to Muskegon. A branch ran from a point just east of Fruitport thru Spring Lake into Grand Haven.

A power house and car barns were built at Fruitport.

Service over this system began on February 8, 1902 when the first car entered Muskegon from Fruitport. The following day the first trip was made on the full length of the road into Grand Rapids.

Sleet and snow on the third rail was a major problem. Two or three times each winter a severe storm struck. Then it was not uncommon to see an employee riding the fender out in front of a car, shovel in hand, scraping sleet off the "hot rail".

The company gave good passenger and freight service, with little friction or drama in its relations with township and city governments. In addition to the usual rail excursion business, the company offered a package deal with both Crosby and Goodrich steamship lines for service between Grand Rapids and Chicago. A low priced pan-

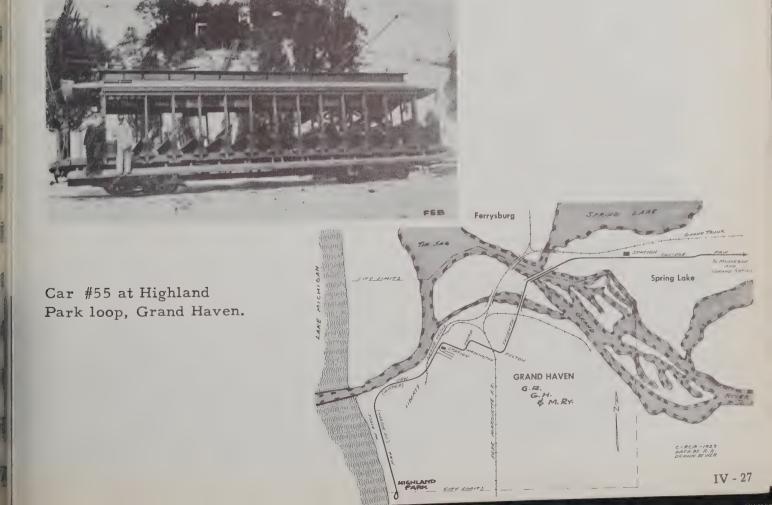
handle trip included interurban from Grand Rapids to Muskegon, boat to Grand Haven and interurban back to the furniture city.

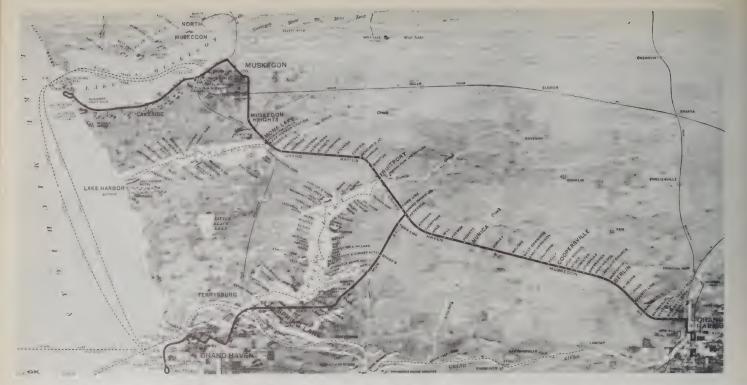
Following World War I, wildcat bus operations cut seriously into traffic. The State's lenient regulatory policies towards bus lines allowed them to flourish at the expense of the interurbans, altho some of the cities such as Muskegon resisted the onslaught of buses.

Business was poor, but by just the extra little bit of revenue which resulted from its good civic relations, GRGH&M managed to make ends meet. In 1925 it was the only traction line in Michigan not in the hands of receivers. But its owners, the United Light & Power Company, wanted out. In May, 1925 the line was sold to local interests, headed by W. K. Morley, President, and S. L. Vaughan, General Manager.

In a fierce struggle with bus competition fares were cut, but still revenues sagged below costs. On July 29, 1926 the Federal Court appointed receivers as a result of default of bond interest. The deficit for 1925 had been \$80,000 and for the first half of 1926 was \$20,000.

The company petitioned to augment its rail service with buses and began this service in June of 1927. Cars continued to run in rush periods only. At the close of the first full year under receivership the loss was \$27,768 exclusive of interest on the bonds. Running out of cash, the company had no alternative but abandonment. This occurred on April 18, 1928.



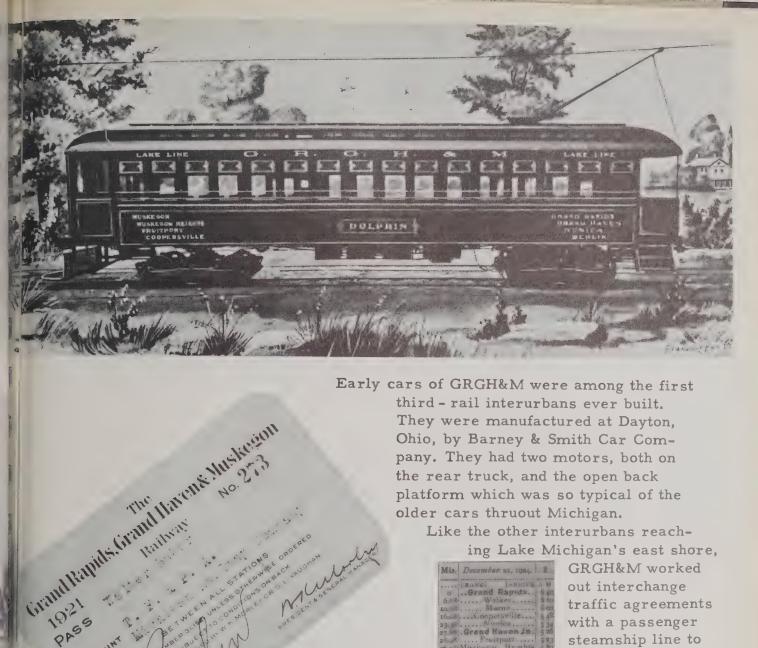




Map at top appeared in colorful traffic promotional piece prepared in 1915.

Center photo shows work extra of motor #99 and stake pocket flat #204 drifting westward on Grand Haven branch.

At right box motor #107 lies ignominiously on its side along the main line after broken wheel incident. Third rail construction of main line shows clearly, with temporary clamp jumper bridging gap caused by wreck.



Early cars of GRGH&M were among the first third - rail interurbans ever built. They were manufactured at Dayton,

Ohio, by Barney & Smith Car Company. They had two motors, both on the rear truck, and the open back platform which was so typical of the older cars thruout Michigan.

> Like the other interurbans reaching Lake Michigan's east shore,

Mls. December as, 1944. 2 Grand Haven In.
Prestport
Musika v. Heights Muskeyn Hon Grand Mayon Jn arr. Objected iv Campby or emot.

GRGH&M worked out interchange traffic agreements with a passenger steamship line to reach Chicago. (See below)



ACCOUNT

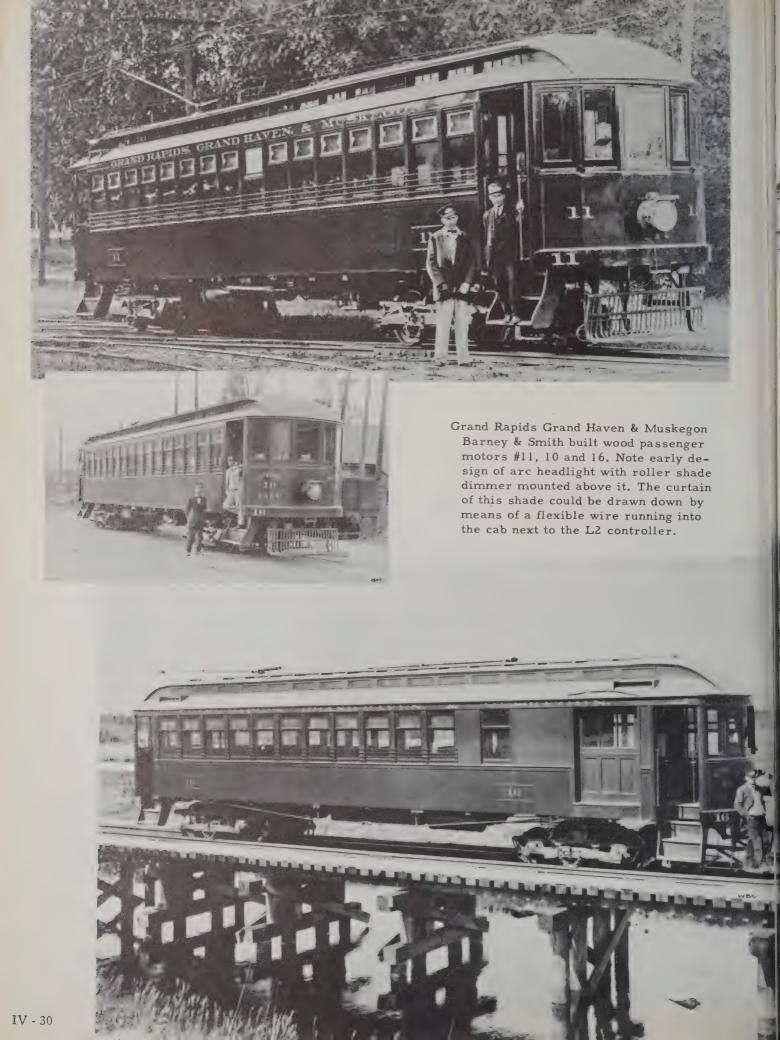
GRAND RAPIDS GRAND HAVEN SPRING LAKE

MUSKEGON



GOODRICH STEAMSHIP LINES

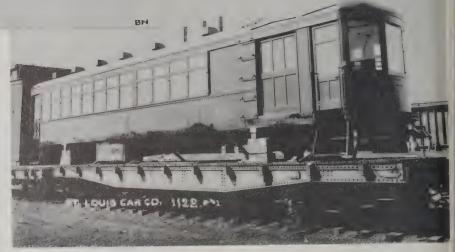
CHICAGO AND **POINTS** WEST





Both northern and southern Michigan ar peninsulas projecting into the Great Lake and are thus vulnerable to heavy snowfall All of Michigan's interurbans experience difficulties from this source, At left, #2 of GRGH&M snowbound about 1920.

Grand Rapids Grand Haven & Muskegon had but one steel car: #20, built by St. Louis Car Company in 1917 (see right). It was ultimately sold to Eastern Michigan Railways, becoming their #7556. Large box under right center of car was Minneapolis - style coal stove heater. Car had General Electric equipment, with four motors and PC control. Three similarly equipped box motors were also purchased the same year, making what is believed to be GRGH&M's final equipment acquisition.



CAUTION Keep back from tracks

THE GRAND RAPIDS, GRAND HAVEN & MUSKEGON RAILWAY COMPANY

A. M. Figures Light Faced Type P. M. Figures Dark Faced Type Central Standard Time

*Daily Except Sunday

TO STOP A CAR

WEST BOUND Read Down 3 7 9 11 19 21 23 25 5 13 15 17 Grand Rapids.
G. R. City Limits.
Walker
Marne
Cooperaville
Nunica
Grand Haven Junction.
Fruitport.
Muskegon Heights.
Muskegon 9.30 9.50 10.00 10.08 10.20 10.31 10.40 10.43 10.55 11.15 5.30 5.59 6.06 6.31 6.40 6.43 6.55 7.15 7.30 7.50 8.00 8.08 8.20 8.31 8.40 8.43 8.55 9.15 11.10 11.30 11.38 11.45 11.57 12.10 12.20 12.23 12.35 12.50 16.68 23.38 27.88 28.98 36.18 101 103 105 107 109 115 121 125 Grand Haven Junction 27 11 Lv.
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Grand Haven 34.30 Ar. 6.50 7.00 7.15 8.00 8.10 8.25 11.20 11.30 11.45 4.10 4.20 4.35 5.40 5.50 6.05 10.40 10.50 11.05 6.40 6.50 7.05 9.40 8.40 8.50 9.05 9.50 10.05 EAST BOUND Read Up 2 8 10 14 16 18 Grand Rapids G. R. City Limits 10.50 10.80 12 30 12.10 6.45 6.25 6.16 6.08 5.55 5.48 5.85 5.30 5.18 5.00 8.00 7.40 7.81 7.24 7.10 6.59 6.50 6.45 6.35 9,10 8,50 8,40 8,88 8,20 8,09 8,00 7,55 7,40 7,20 3.20 3.00 2.50 2.43 2.30 2.19 2.10 2.05 1.50 1.30 5 20 4 53 4.50 4.42 4.29 4.18 4.10 4.05 3.50 3.30 6.50 6.28 6.20 6.12 5.59 5.48 5.40 5.35 5.20 5.00 7.59 7.28 7.20 7.12 6.59 6.48 6.40 6.35 6.20 6.00 9 50 9.28 9.20 9.12 8 59 8.48 8 40 8.35 8.20 8.00 11.50 11.28 Walker
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Coopersville
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Train Nos. 112-126 make no connections for points east of Grand Haven Junction Frain Nos. 101-118 makes no connections at the Junction for points west on Main Line

TRAVEL AND SHIP YOUR FREIGHT BY G. R. G. H. & M. RY. from Timetable #94, 9-27-26 **JRM**

SPECIAL \$1.75 DAILY EXCURSION \$1.75

(Grand Rapids Railway Transfer Included) ROUND TRIP GOING AND RETURNING THE SAME DAY

BETWEEN

Grand Rapids

Muskegon Muskegon Hgts. Spring Lake Either Direction Grand Haven

Tickets Must Be Purchased from Agents.

SPECIAL RATES

ON APPLICATION FOR

LODGES-SOCIETIES AND

SPECIAL PARTIES

MILEAGE BOOKS 500 Miles, \$10.00 GOOD FOR PURCHASER AND FAMILY LIMITED TO THREE MONTHS

COUPON TICKETS

10 for 50c

GOOD FOR FAMILY AND FRIENDS UNTIL USED, BETWEEN SPRING LAKE AND GRAND HAVEN

STANDARD TIME	LET YOUR WATCHWORD BE "SAFE										
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	HEN TWELVE HOURS LATE SCHEDULED	TRAINS LOSE TIME TABLE RIGHTS									

Grand Rapids, Grand Haven & Muskegon

OPERATED BY UNITED LIGHT AND RAILWAYS CO.

TIME TABLE

No. 81

Destroy All Time Tables of a Previous Date.

READ THE RULES CAREFULLY.

Important Changes Have Been Made.

When in Doubt Take the Safe Course and Run No Risk.

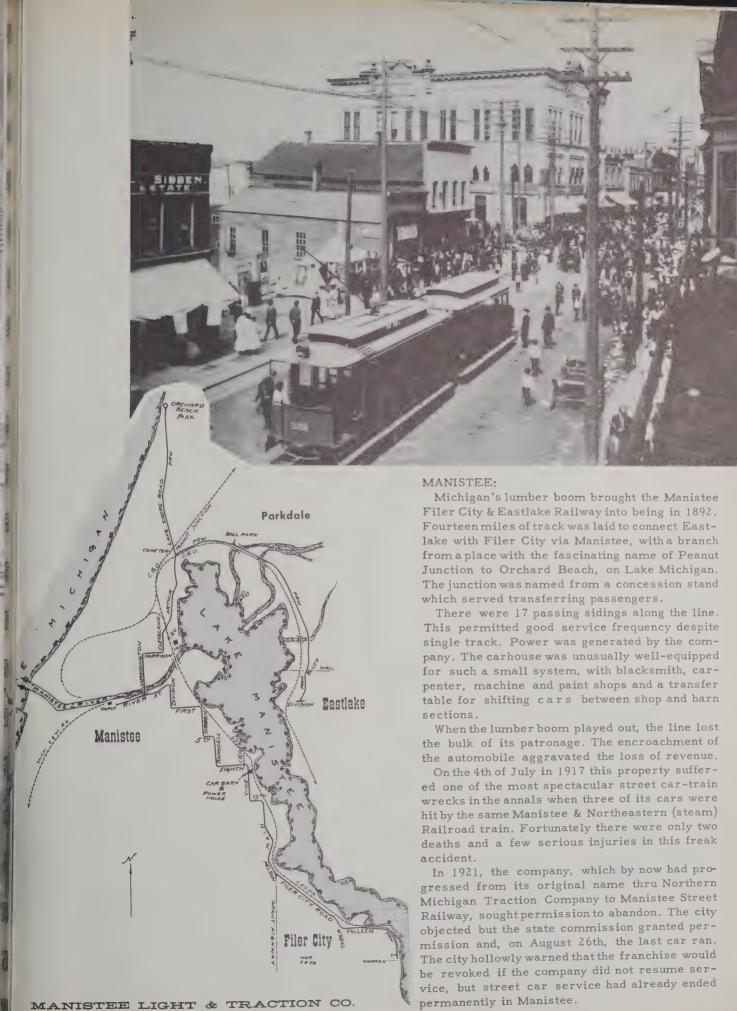
All trains when on the tracks of the Grand Rapids Railway and the Muskegon Traction Ge. must be governed by the Time Tables and Rules of those Companies.

In Effect 3:00 A. M., Sunday, January 14, 1923

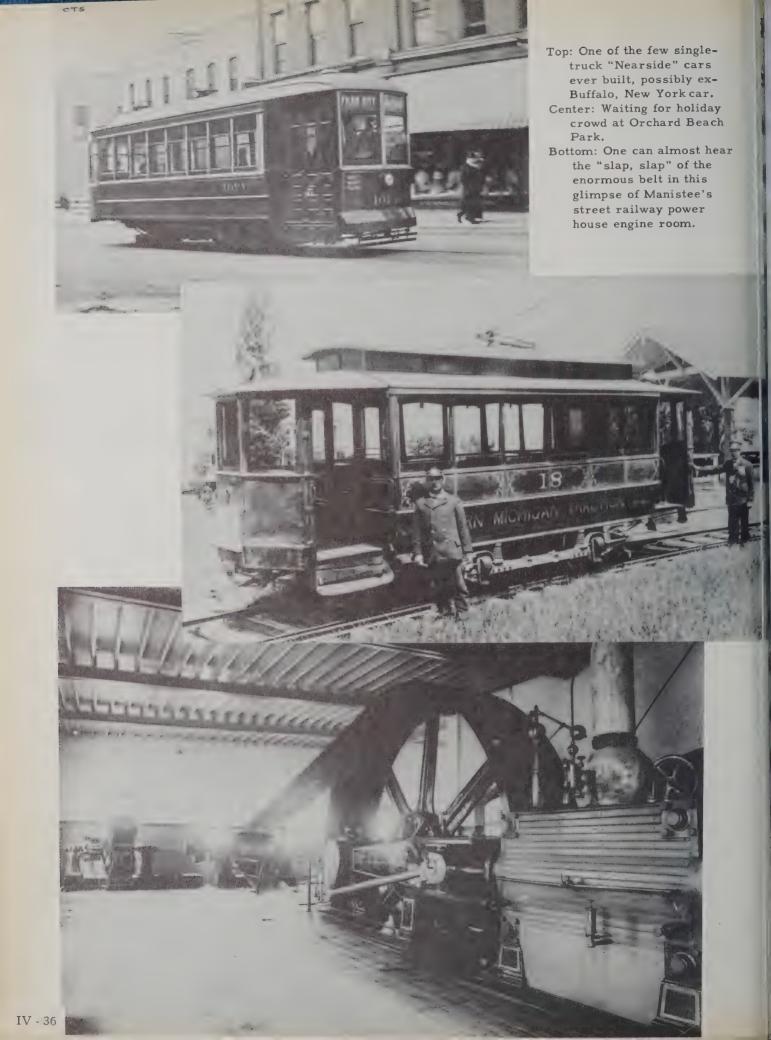


Freight motor equipment on GRGH&M consisted of these types of box motors (above) and apparently downgraded motor as trailer (below). Like the wood passenger cars, they had two motors, usually both in the rear truck, which had a longer wheelbase, and there was again that open rear vestibule.





IV - 35



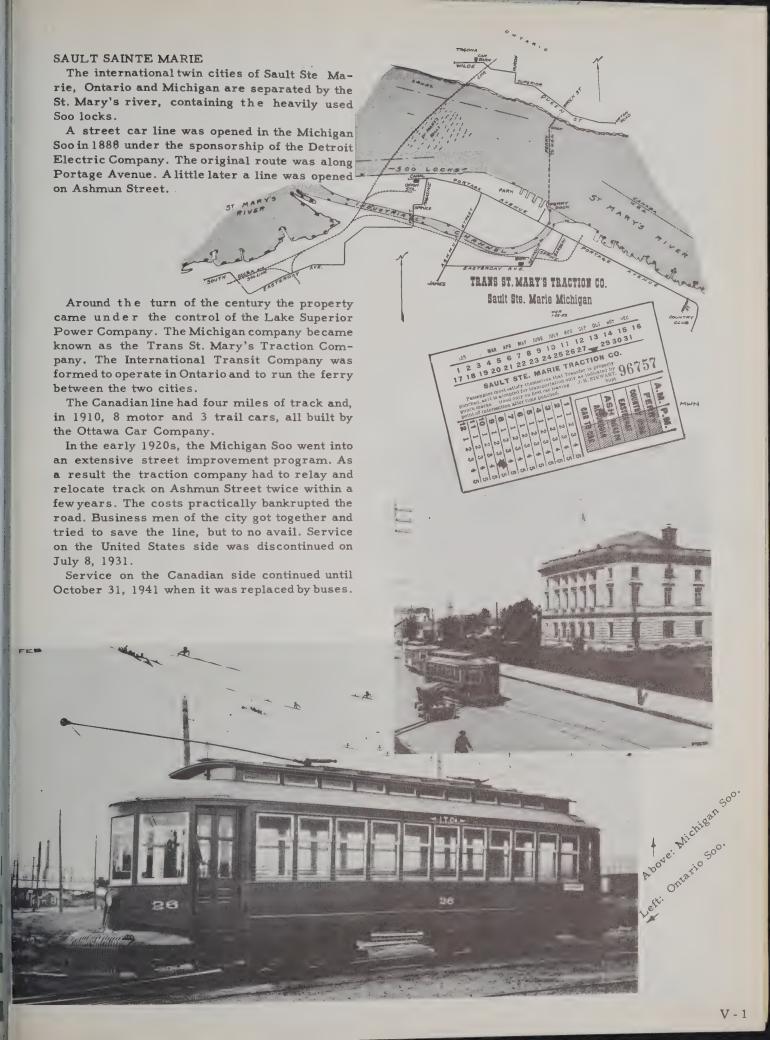
Section V

Lines in UPPER peninsula

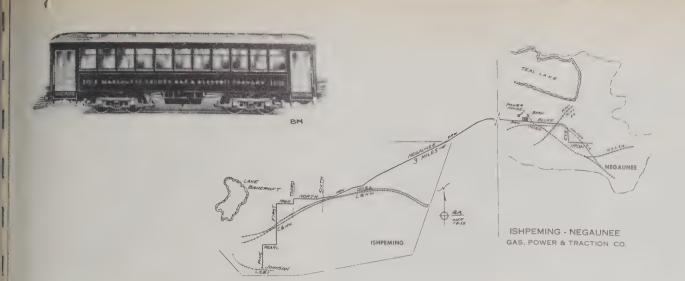
CONTENTS:

- 1 Sault Sainte Marie
- 2 Port Inland
- 3 Ishpeming-Negaunee
- 3, 4 Escanaba
- 5 Marquette
- 6, 7 Menominee
- 8 Iron River
- 9-15 Houghton County*
- 16 Ironwood-Bessemer
 - *Because of space limitations, roster of equipment of this company has been printed at bottom of page 6, Section IV.









ISHPEMING-NEGAUNEE:

Franchise for the three-mile line between Ishpeming and Negaunee was granted in July 1893. Initially a summer-only operation, increased demand made winter operation a necessity after a few years.

After 14 years of service with only single truck cars, the company graduated to double-truckers with two Jewetts bought in 1907 and a Niles that was acquired the next year. Under the weight of these heavier cars, it became necessary to replace the original 40-lb. running rail with 60-lb. stock in 1911.

The banner years of this property occurred between 1910 and 1913. Even then success depended on hauling baseball fans and picnickers to Union and Cleveland Parks.

After slowly ebbing away in traffic, the last run was made on August 20, 1927.





ESCANABA:

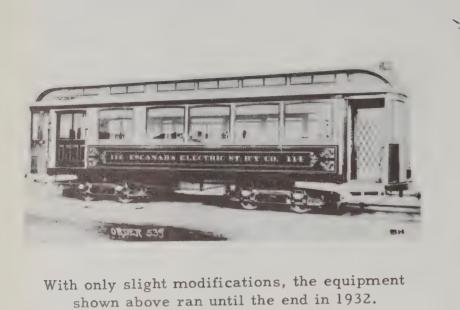
The Escanaba Traction Company started service in 1892 with lines in the city and extending to the nearby community of Wells. Horses were kept available as standby power in those early days before electric power had reached a dependability status.

In 1911 a branch nine miles in length was built from Wells to Gladstone, mostly on private rightof-way. The line had a noteworthy trestle over the Escanaba River.

Despite being located in an area of heavy snowfall, the line never owned a sweeper. However, all cars were fitted with snow brushes during winter, and more than one crew had to enlist the passengers to help dig out a car stalled in a drift.

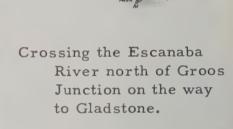
The greatest source of revenue of the Gladstone line came from hauling workers to a chemical and extract plant, but the scenic ride along the lake enticed many joy-riders in season.

By 1932, however, the company had lost most of its traffic to the private automobile and when the franchise expired in that year, the company elected to close its operations.





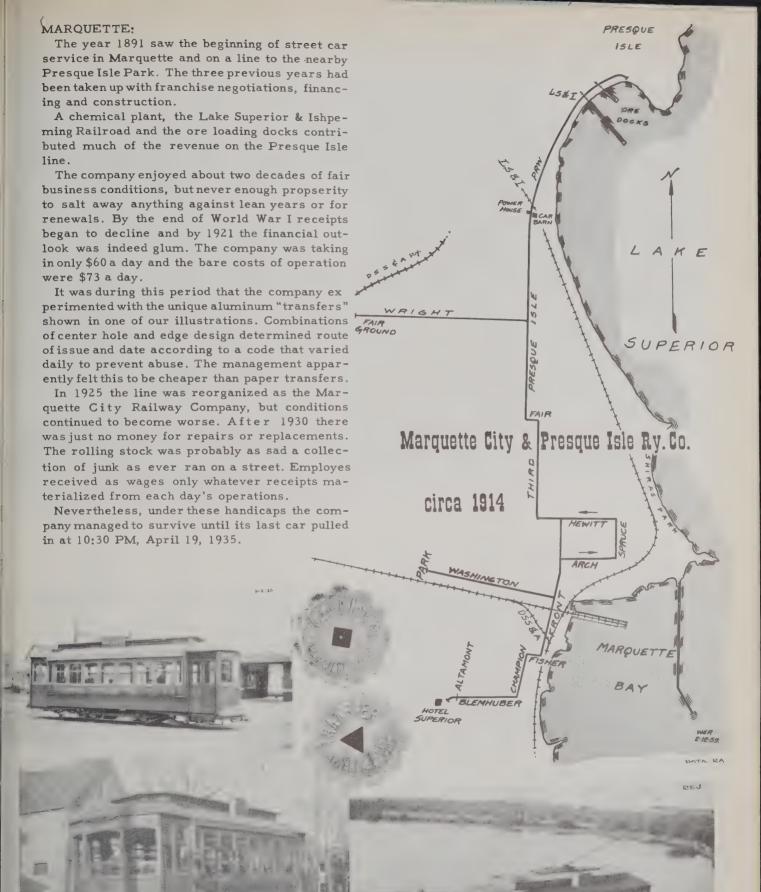
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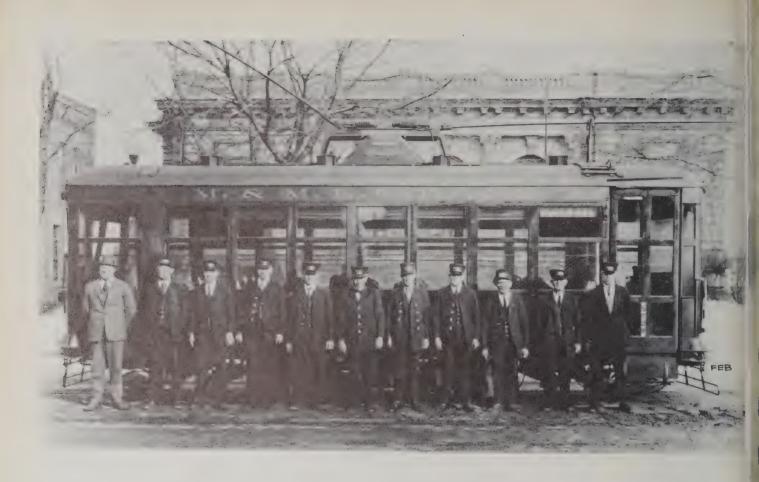


WELLS

ESCANABA TRACTION CO.

Over Paper Mill Pond and under Soo Line railroad bridge on Groos branch line.





MENOMINEE-MARINETTE:

Menominee, Michigan, and Marinette, Wisconsin, are twin cities separated by the Menominee River. The early beginnings of a transit system here came with a mule car line in Marinette, started in 1889. Mules gave way to electricity in 1891. Construction of an electric railway in Menominee began in 1890. Neither company entered the territory of the other at first, but cars met and traded passengers in the middle of the Interstate bridge.

In 1903 all utilities of the two cities were combined into the Menominee & Marinette Light & Traction Company. While management was more efficient, practical negotiations with municipal authorities were hampered as elected officials tended to lump all problems together and agreement on one part of the operation alone was difficult to reach.

All franchises expired in the early 1920s, that for the street railway on April 7, 1923. Protracted wrangling delayed a new franchise.

By 1926 losses were sufficient so that the company asked for a four-month trial of buses in Marinette. Meantime the State of Wisconsin asked for a commitment from the company as to the share they were to carry of the cost of rebuilding the Interstate Bridge. The bridge had to be closed to traffic in the spring of 1927, ending intercity rail service and the company declined to share in the cost of the bridge work.

In 1928 both the Wisconsin and Michigan commissions granted permission to replace rail service with buses.





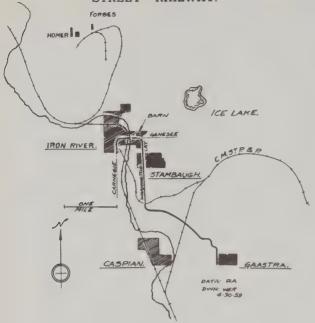
Above: Menominee & Marinette Car #17 on Main Street, Marinette in the early 1900s.

Below: Car #57 at John Henes Park, Menominee. Builder, American, 1915. (Both: FEB



IRON RIVER, STAMBAUGH & CRYSTAL FALLS.

STREET RAILWAY.



IRON RIVER:

The Iron River Stambaugh & Crystal Falls Street Railway was the shortest-lived electric railway in Michigan, as well as the last to enter the picture. Started in 1913 to connect the towns in its name, it was able to build only from Iron River to Stambaugh, Caspian Mine and Gaastra.

It was hoped that profits from this operation would pay for the extension to Crystal Falls, but

the population served was so small that the road couldn't pay off the original investment, much less show a profit to pay for more.

After only & years of service, the line was shut down in 1921.

Iron River's cars came second-hand from Chicago: Below is #5532, and at bottom, under snow scene, is #4191.



HOUGHTON-HANCOCK-MOHAWK:

Encouraged by the boom in Michigan's copper country, the Houghton County Street Railway was built beginning in 1900. It was the only true interurban line in the Upper Peninsula.

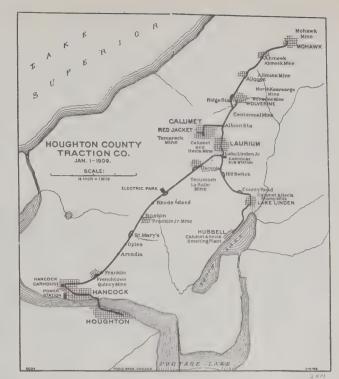
Construction began in the spring and service in November of 1900 over the initial trackage connecting Houghton and Boston. By 1901 the line was extended to Calumet. Branches were built to tap the neighboring mining areas of Lake Linden, Wolverine, Hubbell. A final extension, opened in 1908 reached the northern limit of Mohawk.

The railway was double track thru the major communities and single track between them, with private right-of-way between towns. An unusual feature was the use of stamp sand, a waste byproduct of the mining operations, for ballast.

The most interesting recollections of this rail-way pertain to its annual battle with the rigors of heavy snowfall. A separate story on this problem, written by one-time superintendent Guy A. Richardson, follows. Mr. Richardson went on to serve the transit industry at Seattle, Philadelphia and Chicago, rising to President of Chicago Surface Lines and later to Vice-Chairman of Chicago Transit Authority.

Severe gradients were encountered on the road, the toughest being the one rising from the water on Quincy Hill in Hancock, this running 7.5-8%. Between Houghton and Hancock the tracks had to cross the highway-railway drawbridge over the Keeweenaw waterway, which is a main line of Great Lakes shipping. Monumental traffic jams during the navigation season were a constant headache.

Railway operations ended on May 21, 1932.



Above: Map from 1909 timetable.



Left: Cleaning up on Lake Linden Av.



SNOW FIGHTING IN THE COPPER COUNTRY

By G. A. RICHARDSON.

Since much information of value and interest has been written regarding snow fighting on the large street railway systems, it may be that a description of the equipment used on The Houghton County Street Railway for battling with the snow, together with a few facts regarding the climatic conditions of the Copper Country, may not be amiss.

Our close proximity to old Lake Superior, by which this little neck of land is nearly surrounded, has a marked influence upon the length of the winter season, upon the amount of snow fall and upon the prevailing winds. The sudden changes of weather which occur without warning are also worthy of consideration, as a snow storm which at first promises to be a light fall of the "beautiful" may in a few hours prove to be a typical Lake Superior blizzard with extremely low temperature.

The Houghton County Street Railway Co. has twenty-seven miles of track, two-thirds of which are interurban. To keep this open in the winter months the following equipment is used: three single truck nose plows, equipped with G. E. 67 motors, one double truck nose with 4 G. E. 57s, one single truck rotary with 3 G. E. 67s, and one large double truck "Ruggles" rotary with 6 G. E. 57s.

During such a winter as the last, which was remarkable for its heavy snow fall, the small nose plows rendered very little service, on account of their light weight: unless backed by a four motor car, they were practically useless except for cleaning up after the rotary or the large nose plow. The low temperature experienced during these storms is responsible for a very frosty rail, and only very heavy equipment will free the ice from the rail in towns where the track is level with the surface of the street. For this purpose the large rotary plow gives the best results, and it is often run through the towns to give the cars a clean rail to run upon. This rotary has suspended underneath it at an angle of 45 degrees to the track, and clearing it by about 2 inches, a large steel plate supported by heavy springs. The springs are strong enough to make the blade shave down the ice center between the rails very effectively, and yet if it strikes any portion of the track on curves or special work, the springs allow it to slide over without breaking. On each hood of this plow are two large iron wings, 6 ft. long by 4 ft. 6 in. wide, braced from the center of the body by a long, latticed angle iron arm. With these wings reaching out four or five feet on each side in front of the fans, this plow with good power can clear a path 18 feet wide through any drift. This rotary was our salvation many times last winter, as it clears a clean cut along the road, throwing the snow thirty or forty feet from the track.

The large nose plow does most of the work, except in the early part of the winter and in the very severe weather, when it is necessary to use the rotaries. Its noses are raised and lowered by compressed air, effecting a great saving in time and labor over the old hand wheel lift. Midway of the body, on each side, is a large sheet-iron wing about six feet in length. With these wings out snow can be piled up ten or twelve feet alongside the track.

On one of our cars for the past two winters a small nose attached to the bumper and draw bar has given excellent results. This car has been used on one of the most exposed lines and has kept the road open better than any thing except the rotary plows. With the four motor G. E. 67 equipment and a good start this car goes through deep drifts without any trouble. At one point on this line the car descends a trestle into a cut fifteen feet deep, which is usually opened up every morning by the rotary, as the wind fills it in nearly level during the night. Owing to an accident to the rotary on two or three occasions, this car was forced to open its own way through this snow, which it did most successfully, although it filled the front vestibule to the circuit breaker and completely buried the motorman. It is intended to equip several more cars in the same manner for the coming winter.

As high ice centers through the towns cause a great deal of annoyance, we have, in addition to the ice cutter under the rotary plow, a home-made cutter installed on a flat car. This cutter consists of a beam, set at an angle of about 30 degs. under the center of the car, on which are placed large steel cutters, similar to large parting tools. Two or three rows of these tools are used, so that there is a cutting edge about every three inches across the track. The entire tool beam is raised and lowered by a lever on top of the

car, and when sufficient weight is put on the car to keep it on the rail the cutter gives excellent service. The cutter car is towed by a four motor car and is followed by a small nose plow to remove the ice.

As we have no shear plows in our equipment, the removal of the ridge of snow between the double tracks presents quite a serious problem. Formerly this work was done by horse scrapers, but as time was only wasted in doing poor work and our expenses were materially increased by the necessary horse hire, we use at present a long wing attached to the center of our nose plows and held at the proper angle on the outside end by a chain which hooks on to the forward nose of the plow. This wing is long enough to push the ridge over beyond the center of the other track, and the plow returning on that track removes the accumulated snow, leaving both tracks clear.

The road is exposed in many places, and owing to the high winds which prevail most of the time the hardest snow fighting is often done when the sky is clear, as the fine dry snow driven by the wind soon fills in the cuts cleared by the plows. Several miles of portable snow fence have been of great assistance in protecting the more exposed sections, but even these fences are useless when drifts fifteen or twenty feet high have accumulated behind them. To dig out the fences and replace them requires no small amount of work, and it sometimes happens along toward spring that they are completely buried, as storm follows storm in such rapid succession that every available man is required just to keep the road in operation.

It is necessary in the towns that the accumulated snow be removed from the streets. This is done by the towns themselves, at their own discretion, and we are called upon to pay half of the expense. These snow bills are no small item in our total snow expense. It is fortunate that this snow is taken care of in the towns, especially where there are double tracks, as the roadway on the side of the street often reaches a point on a level with the windows of the car.

It would undoubtedly appear strange to one unaccustomed to the conditions, to see plowing (a man, with a regular farm plow) being done in the streets during zero weather. Such however is the case here during the winter, in order to break up the packed snow and reduce the level of the roadway to within a couple of feet of the car tracks. This is very expensive, as the work progresses slowly. Often, only one side of the street is kept in a passable condition, while the snow banks on the other side resemble a small mountain range with their numerous drifted peaks. The walks for pedestrians are never plowed in this country but follow the drifts, which may be high or low according to the spirit of the wind. Large horse rollers are used to make the walk hard, and a scraper is employed to scratch the surface to keep one from slipping. It is interesting to a passenger to sit near a window and watch the people wending their way along a path on the level with the car windows and to see on the other side of the street sleighs passing on a friendly level with the eye.

This past winter was the most severe in the annals of the company, and though it did not begin in earnest until the middle of January, it lasted until the middle of April with scarcely any let up! The temperature stays so low that snow that comes in November often stays until April. As furnishing an idea of what this means the following table of snow fall for the past six years, which is extracted from figures compiled by Mr. E. S. Grierson, weather observer for the Calumet & Hecla Mining Company, will undoubtedly be of interest:

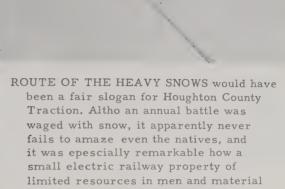
SNOWFALL IN INCHES IN CALUMET, MICH., FROM 1901-2 TO 1906-7.

	0.25 6.25	Nov. 15.00 9.00 39.00 15.25 24.25 19.67	Dec. 31.00 52.00 52.00 55.50 31.00 35.15	Jan. 43.00 22.00 33.50 37.00 22.00 39.00	Feb. 24.00 24.00 11.00 14.50 27.00 10.00	Mar. 12.00 11.00 21.00 7.50 25.00 16.50	Apr. 7.50 18.00 10.50 5.50 0.50 35.00	3.00 3.00 3.00	Total. 3 132.50 139.00 170.00 138.50 135.00 171.50	7t. & In. 11.01/2 11.7 14.2 11.61/2 11.3 14.31/2
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For the ten days ending April 16, 1907, 35 inches of snow fell, and owing to the lateness of the season we were caught unawares. Drifts ten to fifteen feet high were formed by the high winds, and for over a week the rotary plow was constantly in commission.

HANCOCK TO HOUGHTON H. C. T. Co. PM PM PM PM PM PM PM PM AM AM AM AM AM AM AM STATIONS. Mls 9.45 10.01 10.15 10.31 11.01 11.31 12.01 12.31 9.53 10.10 10.22 10.40 11.10 11.40 12.10 12.40 10.00 10.18 10.30 10.48 11.18 11.48 12.18 12.48 Ly 5.13 5.43 6.01 6.31 7.01 7 15 7 31 7 45 5.20 5.50 6.10 6.41 7.10 7 22 7 40 7 53 Ar 5.28 5.58 6.18 6.49 7.18 7 30 7 48 8 00 GENERAL INFORMATION Should any difference arise between yourself and the conductor, pay the latter's claim, take receipt for amount HOUGHTON TO HANCOCK and refer the matter to the Superintendent for adjust-AM AM AM AM AM AM AM AM PM PM PM PM PM PM PM PM STATIONS. Special cars for private parties, picnics, etc., furnished on short notice at reasonable rates. Arrangements for such service should be made with the Superintendent as O Douglass House..... 9 Hancock Bank Corner. 1 9 Suilivan's Curve..... Calumet or Assistant Superintendent at Hancock. Children under five years of age, when accompanied by parents or guardian, are carried free, but are not to occupy seats when same are needed for paying passengers. Hand baggage only will be allowed upon the cars Conductors are required to give an accommodation check to everyone paying more than a 5-cent fare. Keep these CALUMET TO WOLVERINE AND MOHAWK. Lost articles are turned in at the Superintendent's office in Calumet, telephone North 327, where they will be returned to owner upon satisfactory proof. Report any impoliteness or discourtesy of employes to the Superintendent. Transfer Points: Lake Linden Junction and Albion Station. Ask conductor for transfer when paying fare. CALUMET TO WOLVERINE AND MOHAWK-CONTINUED. Our cars run near all of the important copper mines MB STATIONS, 0 Red Jacket. 1 2 Albion Station 2.9 Wolverine 2.9 Ridge Station 3.8 Allouez Station 4.9 Almeek Station 7.0 Mohawk north of Portage Lake and a splendid idea of this mining country may be secured by a trip from Houghton to Calu met or Mohawk. Smoking is allowed only in the vestibule. NOTICE:-While every effort is made to show correct time of cars, this company will not be liable for errors. Time tables are subject to change without notice. Cars operate on Standard Time Mile STATIONS. 0 East Houghton. 1.0 Doughass House. 1.9 Hanceck Bank Corner. 3.2 Hanceck Carhouse. 3.8 Hanceck Carhouse. 3.8 Hanceck Carhouse. 3.9 Boston. 10 0 Electric Park. 13 4 Lake Linden Junction. 11.0 Laurium, Third Street. 15 3 Albion Station. 16.5 Red Jacket.AM AM DO NOT ENTER OR LEAVE CARS WHILE IN MOTION. MIS OEast Houghton. OEast Houghton. OBJUST Houghton. I OBJUST Houghton. I Hancock Hank Corner. 2 Hancock Varhouse. I S Franklin. OElectric Park. I A Lake Linden Junction I A Lake Linden Junction I Gled Tarke. S Albion Station. Note—Cary leaving East Houghton at W. H. WOORATH, MANAGER. J. H. DUFRESNE, AST. TREAM THE THE HOUGHTON COUNTY STREET RAILWAY CO. NOTE-Cars leaving East Houghton at five minutes after the hour up to 10.05 p. m. are scheduled to connect at Lake Linden Junction with cars for Lake Linden and Hubbell. Cars leaving East Houghton at five minutes after the even hour: "e scheduled to connect at Albion Station with cars for Mohawk. Note Sundays, cars start one hour later." Excerpts from timetable dated Jan. 1, 1909. E.T. BANDEN, PROVINCE, PRESIDENT, HENRY G. BRADLEEF, VICE-PRESIDENT, P. J. BANDEN, PROSIDEN. THE TY C. HEADINES VICE PRESENTED. * Mohawk Line Started Dec 4, 1908 Water Fam. P.S. et land. State. State Substa Houghton County Operating Jan. 6125 95 60739 6067 606 181.08 413 54.46 384.393 254.593 1,128,000 11,349,166 398 10.06 1.24 129,178 218 Lbs. of Lbs. of Lbs. of Han PS Feb. 6262 91 55235 5535 977 175 9043 53.74 355,709 249 008 1,038,000 10,340,8333.39 9,96 1,37 120,242 20 COURT: NA TO THE MAT. 6254 10659661 5958 1003 18054338 62 40 424, 181 204, 049 920, 100 8, 697, 5004, 21 9, 45 1, 00 90 011 V - 12





could hold its own against nature.

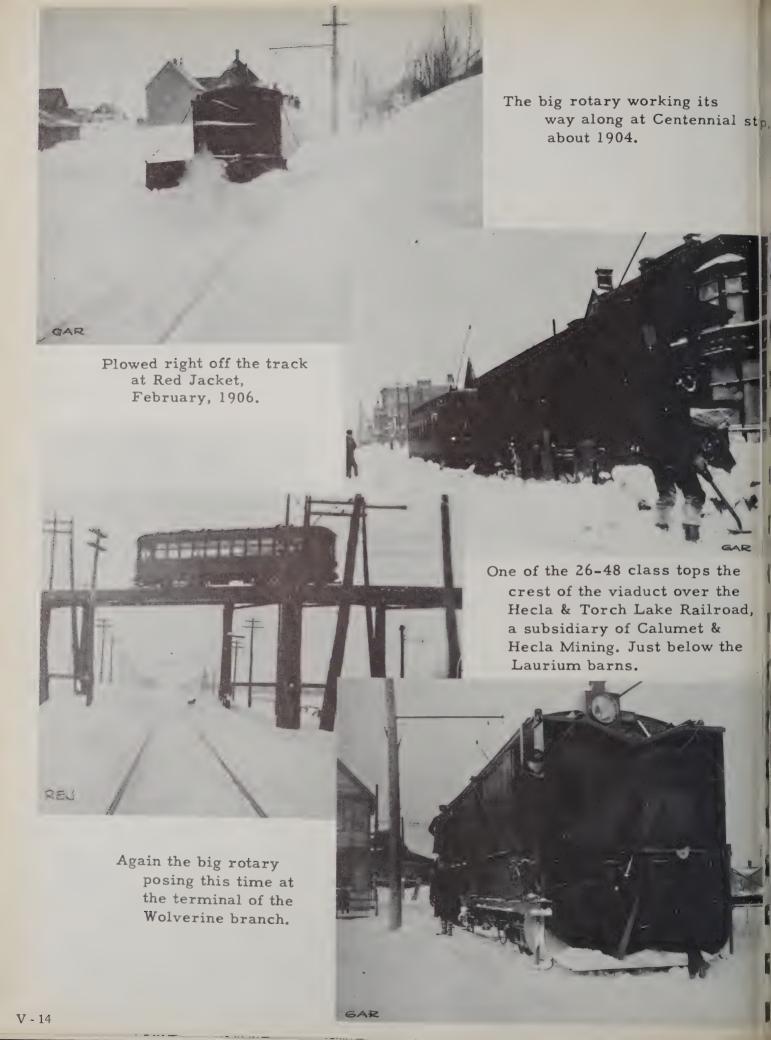
From the upper left: At Cemetery stop (1).

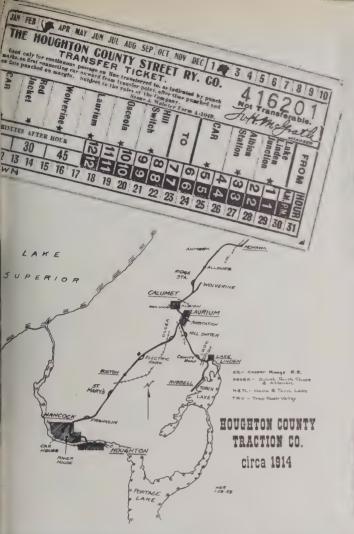
2) In Rhode Island Woods. 3) At Calumet railroad station, March 24, 1913. 4) On Hecla St., Laurium, March 4, 1906.

5) On the Wolverine line after the amazing storm April 15, 1907. 6) On Lake Linden Avenue, March 4, 1906. 7) On Woodland Avenue, January, 1907.

....all from Guy A. Richardson.











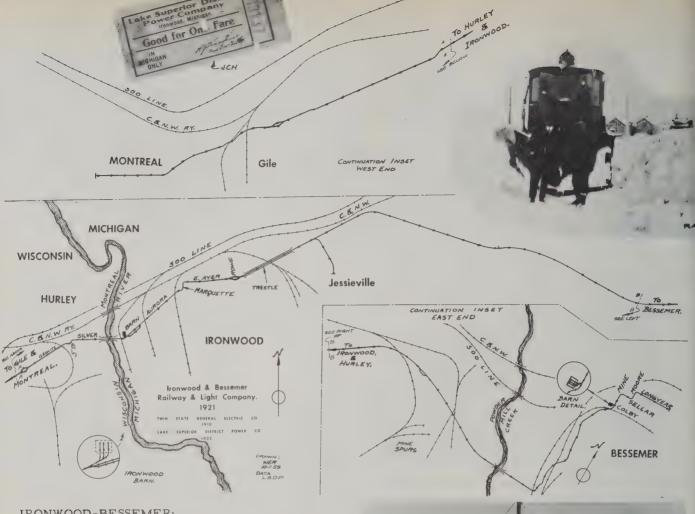
Both above: Last day of operation, May 21, 1932. Top, #26, then #24 below.

UPP

Above: Sideswipe between Houghton and Wolverine cars about 1906.

Right: #12 squeezes along a deep drift, about 1905.





IRONWOOD-BESSEMER:

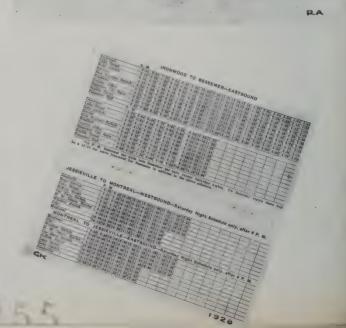
In November, 1910, the Gogebic & Iron County Railway & Light Company was incorporated in Michigan. Less than a month later a company of the same name was incorporated in Wisconsin. From then until 1922 the property changed names often, but it was then acquired by the Lake Superior District Power Company, who owned it until the end.

Its railway route was begun in 1911, and ultimately joined Hurley and Montreal, Wisconsin, with Ironwood, Bessemer and Jessieville, Michigan, a total of about 12 miles.

On acquiring the road, LSDP tried to be relieved of paying for the paving between the rails, promising to improve the road and acquire new cars. Althothe voters rejected the proposal, the company nevertheless bought new cars, ordering them the day after the election.

Revenue continued to drop, however, and in September, 1932, the voters decisively approved abandonment which occured later that year.









MICHIGAN'S INTERURBANS



Michigan's first interurban, the Ypsilanti and Ann Arbor began operating in 1890. Pulled by a steam engine, the cars went west on Packard Road to the Ann Arbor city limits. Because of the low fares (10 cents one way) and frequent service (cars leaving every 90 minutes) the line was soon carrying over 600 passengers daily. Electric power was adopted in 1896. In a few years a network of interurbans was built in southern Michigan. The Ypsi-Ann became part of a Detroit to Jackson road that carried 5.300 passengers a day in 1902. It became possible to go from Detroit to Kalamazoo or from Bay City to Cincinnate on connecting lines But the automobile, bus, and truck put the interurbans out of business in Michigan in the 1920. The last interurban from Ypsilantlers in 1920.

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